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Original Articles

PARAVERTEBRAL TRIANGLE OF DULNESS (GROCCO'S SIGN)

IN A CASE OF ABDOMINAL MULTILOCULAR CYSTADENOMA.*

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In various conditions complicated with collections of fluid in the pleural sacs, the clinical observations of Grocco,[1] Baduel and Siciliano,[2] Rauchfuss,[3] Thayer and Fabyan,[4] Ewart,[5] Morison[6] and others, have established the constancy of an area of percussion dulness, roughly triangular in outline, lying along the spine, on the opposite side to that on which the fluid is found. This paravertebral triangular area of dulness appears to have a distinct value as a point in differential diagnosis between conditions of pulmonary consolidation, mediastinal growths, etc., and conditions, associated with pleural effusion. It has even been suggested[7] that the paravertebral triangle of dulness is pathognomonic of the ordinary type of pleural effusion. Recently, however, attention has been called to the fact that triangular areas of dulness may be percussed along the spine in affections where the thorax is not the seat of the pathologic process. Ewart[5] now admits that in cases of ascites, Grocco's sign may be present, and Beall[8] cites a case of subphrenic abscess, on the right side where "there was an easily definable paravertebral triangle on the left." He suggests that the sign may occasionally be expected in other subphrenic conditions, such as tumors and cysts of the liver, abscesses, etc.

The patient furnishing the material for this report exhibited the unusual findings of an encapsulated collection of fluid, apparently wholly within an abdominal tumor, that was in no way intimately connected with the diaphragm or organs lying adjacent to the diaphragm; there was a well-marked area of paravertebral dulness, but no demonstrable exudate in either pleural sac. Evacuation of some of the fluid from the abdominal tumor was accompanied by distinct changes in the area of paravertebral dulness. Removal of the tumor mass promptly brought about the disappearance of the dulness lying to the left of the spine in the thoracic region. A few details of the clinical history of the case will suffice to bring out the interesting features.

Patient.—Mrs. A. N., aged 39, recently entered Professor Dock's clinic on account of an abdominal tumor, which had been present for more than fourteen months; weakness, loss of weight, abdominal pain of no distinct type and ascites (?).

History.—Thirteen years ago the right ovary was removed for an enlargement of the nature of which she is ignorant. Was married at 27; was never pregnant; still menstruates regularly. Shortly after ovarian operation, hernia developed at side of incision, and patient wears a stout truss. History otherwise negative.

July, 1906, a mass was noted in left hypochondrium. It grew rapidly larger, and in October, 1906, was tapped, and a large amount of fluid removed. Since that time she has been tapped fourteen times. At present the abdomen is as large as it ever was. Apart from the abdominal condition she has been in fair health.

Examination.—A rather cachectic woman of medium build. Thorax: Anterior, short, but fairly broad; expansion somewhat poor, but symmetrical; respirations shallow; no distinct Litten's sign on either side. Liver-lung border at fourth space in the mid-clavicular line; dulness in left axilla begins at the sixth space and continues downward into the abdomen; Traube's space dull. Auscultation: Negative, except for harsh vesicular breathing over both uppers. Heart: Apex beat in fourth i. c. s. about 5½ cm. beyond the left sternal edge. Sounds rather weak; no arrhythmia. Thorax: Posterior—Upper thoracic region negative. For percussion outlines of lower thorax see Figure 1. There were no percussion or auscultatory evidences of free fluid in either pleural sac. With the patient sitting on the edge of the bed and leaning forward a paravertebral area of dulness, somewhat triangular in shape, could readily be percussed to the left of the spine. It will be seen by consulting the figure that it was low for its breadth at the base. The spinal dulness extended from the eighth to the tenth dorsal spine, a distance of about 4 cm. At the level of the tenth rib the base extended to the left for a distance of about 6½ cm. from the midvertebral line. The hypothenuse of the "triangle" was rather markedly convex outward, the lower portion of the line descending somewhat abruptly to meet the base line. The limit of thoracic resonance to the left of the triangle was at the tenth space. On the right the liver dulness was made out at the ninth rib. This was about 1½ cm. below where the dulness on the spine began. The shape as well as the size of the paravertebral dull area was little influenced by changes in the patient's position. When the patient leaned forward, with the head on the knees, the triangle was somewhat more sharply defined; sitting erect or leaning backward produced a rather smaller area of dulness; leaning to the right produced no perceptible alterations. Lying on the left side brought out more marked spinal dulness, but no changes in the base line of the triangle. Auscultation: No breath sounds could be made out over the paravertebral dull area; to the left of the triangle the breath sounds were somewhat harsher than at points of the lung above or to the left in the axilla. There were no alterations in the voice transmission.

Abdomen: Markedly globular; bulged in the flanks and rose abruptly from the base of the xyphoid. Was rather fuller in the left upper quadrant than the right, the fulness continuing upward beneath the lower ribs. The abdomen measured at the level of the tenth ribs, 102 cm.; at the level of the iliac crests (about level of navel, also) 106 cm.; from navel to pubis, 17 cm.; from navel to base of xyphoid, 32 cm. On palpation a large, smooth, rather globular mass could be made out filling

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* From the Clinic of Internal Medicine of Professor George Dock.

1. Riv. crit. di clin. med. Firenze, Nos. 13 and 14, 1902.
2. Ibid., 1904.
3. Deutsch. Arch. f. klin. med., 190- ix, 186, 219.
4. Am. Jour. Med. Sciences, January.
5. Lancet, Lond., 1907, ii, 49, 189.
6. Lancet, Lond., 1907, ii, 112.
7. Ewart: Progr. Med., 1907, ix, 40.
8. THE JOURNAL A. M. A., Dec. 28, 1907, p. 2148

the lower three-fourths of the abdomen and extending upward to the left more than the right. There was distinct fluctuation at any part of the abdomen, but more at the level of the navel. Stomach: Inflation revealed slight displacement to the right and downward. Colon: Very capacious in the ascending and descending portions. The transverse portion was displaced upward.

Progress of Case.—The patient was tapped by Professor Dock two days after entering the hospital, and eleven and one-half liters of slightly opalescent fluid were removed. Examination of the back after tapping showed dulness as in Figure 2. There was dulness on the spine at the level of the ninth and tenth vertebræ. The base of the triangle to the left measured about 2½ cm. The percussion and auscultation

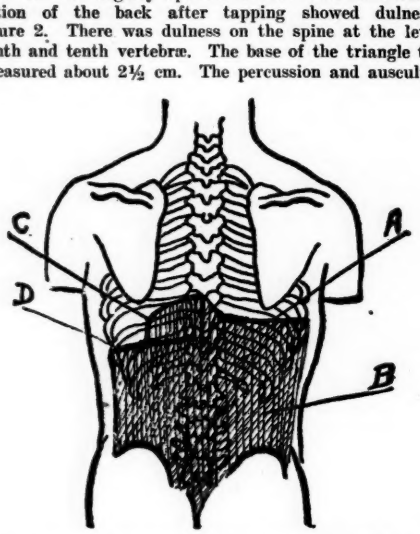

Fig. 1.—Outlines of percussion dulness. A, upper limit of liver; B, flatness in flanks and lumbosacral regions: D, lower border of thoracic resonance on left: C, paravertebral dulness, base 6½ cm.; vertical spinal dulness, about 4¼ cm.

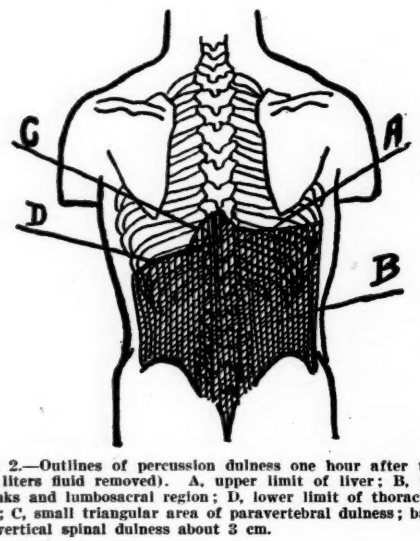

Fig. 2.—Outlines of percussion dulness one hour after tapping (11.5 liters fluid removed). A, upper limit of liver; B, flatness in flanks and lumbosacral region; D, lower limit of thoracic resonance; C, small triangular area of paravertebral dulness; base 2½ cm.; vertical spinal dulness about 3 cm.

of the adjacent lungs were negative. A large mass, of distinctly cystic feel, could be made out definitely in the abdomen. The patient was transferred to the gynecologic clinic and Prof. Reuben Peterson removed an enormous multilocular cystadenoma. Examination of the back four days after operation revealed absolutely no evidences of paravertebral dulness on either side. The liver was at the ninth rib in the right midscapular line. The lower limit of thoracic resonance to the left was at the tenth rib, and continued inward to the spine.

The cause of the paravertebral dulness in this case appears to be due primarily to the presence of the large, cystic, abdominal neoplasm. Just in what manner this new growth produced the changes in the thorax can only be conjectured. It would seem that in cases where paravertebral dulness exists from causes that are extrathoracic, something more than mere displacement of the mediastinal tissues (as suggested by Baduel and Siciliano[2] in explanation of Grocco's triangle) must take place. In the case herewith described, the positions of the heart, liver and spleen, together with the absent Litten's sign on both sides, certainly point to a rather marked upward displacement of the diaphragm. It might be suggested that on account of the support offered the diaphragm by the liver on the right side, locally, the diaphragm was pushed upward to a greater extent to the left. In this manner one might fancy that some displacement of the mediastinal tissues took place, and that the lung on the left was pushed from the spine. One must not forget, however, that displacement upward and to the left of the liver itself could produce paravertebral dulness. The prompt disappearance of the dulness to the left, after extirpation of the tumor, enables one to rule out secondary growths in the mediastinal tissues or in the lung, and also speaks against the possibility of an unrecognized pleural effusion.

THE DIFFERENTIATION OF BACILLUS COLI COMMUNIS FROM ALLIED SPECIES IN WATER.*

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It is not the purpose of this report to deal with the old and controversial question of the significance of *Bacillus coli communis* as an indication of pollution in drinking water, nor to go into details upon the typical or atypical biologic characteristics of the organism; but especially to determine a constant biologic feature by which it can be differentiated with certainty from the allied species of the colon group. It is common knowledge that *B. coli communis* presents such extensive variations that often cultures isolated from water and reported as identical with this micro-organism will, if studied more closely, be found to have very little or no relation at all with it. The hypothesis that the acceptance of such variations in *B. coli communis* is responsible for the unsatisfactory results often obtained in the bacteriologic examination of drinking water has been the basis for undertaking the following studies.

I believe *B. coli communis*, like *B. typhus, B. diphtheriæ, B. anthracis*, etc., is a single micro-organism, not a group; and if its biologic and morphologic features are sufficiently studied, is not to be confused with others. It is true that sometimes an atypical reaction is seen, but this irregularity if carefully inquired into will be found to depend, not on the colon bacillus itself, but on the condition in which it has been placed. The colon bacillus is commonly regarded as an acid-producing micro-organism. The reaction, however, depends entirely on the presence of sugar in the culture media; and in plain neutral bouillon the reaction of the culture will be alkaline.

* Reported from the Pennsylvania State Department of Health Laboratory, University of Pennsylvania.

A. PRODUCTION OF INDOL.

This depends on the presence of a proteid substance, peptone for instance. In such a medium, moreover, the presence of sugar inhibits the production of indol, which will be manifested only after the sugar has been exhausted by the colon bacillus. Further, under anaërobic conditions and by cultivating the organism on special media containing phenol, nitrates, etc., the production of indol may be inhibited or completely abolished; and, following the ordinary technic, by using a 1 per cent. peptone bouillon Lembke, Roux, Widal, Malvoz, Vallet, Dunham, and others, have reported cultures not producing indol, but otherwise typical of *B. coli communis*. Morris, however, by employing a 5 per cent. peptone bouillon and making his test after from ten to twenty days, obtained positive indol reactions from the same cultures. It is probably due to such variations that our literature on the organism in question is full of such classifications as "strong indol-producing colon bacilli," or marked "distinct," "weak," "faint" and finally "negative" indol-producing types. Such classifications seem to me the result of too precipitate conclusions from superficial observations. They are presumed to depend on variations in the organism when in reality they are the result of variations in the medium of cultivation and the technic employed.

Much to my surprise, I have often observed a positive indol reaction in sterile meat sugar-free bouillon, and a close study of the subject has convinced me that the practice of preparatory fermentation of the meat-juice with *B. coli communis*, as recommended by Smith and followed by leading bacteriologists abroad and in this country, can not be too strongly condemned. This preliminary fermentation with the colon bacillus for from eighteen to twenty-four hours (and by neglect often forty-eight or more hours) is sufficiently protracted for the production of more or less indol, which then remains in the medium. The sterilization I found to be without effect in this reaction, as the medium thus fermented gave typical reactions before and after exposure not only of thirty minutes to 100 C., but also after from twenty to thirty pounds steam pressure exposure for half an hour. To this, doubtless is due our new literature on "indol-positive typhoid cultures." In this laboratory I employ a strong saccharolytic organism, isolated from water, producing from 80 to 100 per cent. of gas in from eighteen to twenty-four hours, rapidly exhausting all sugars, and failing in the most careful test to produce indol. With the medium thus prepared I have never obtained the slightest trace of indol in any typhoid cultures which I have examined; and it is my belief that no true typhoid organisms can produce indol and that no true *B. coli communis* ever fails to show the reaction of Salkowsky.

B. NON-LIQUEFACTION OF GELATIN.

Almost every bacteriologist is of the opinion that a liquefying organism does not belong to the colon group, and that of *B. coli communis* never liquefies gelatin. It is not the question of liquefaction or no liquefaction which I wish to discuss, but rather the conditions under which such an important reaction is tested. The procedure recommended by the American Medical Association includes incubation at from 20 to 22 C. and the use of medium of from 1 to 1.5 per cent. acidity, both of which I have found unsatisfactory, not because *B. coli communis* will be affected by the reaction of 1.5 per cent. acidity, but because the proteolytic fermentation proceeds better and more quickly in most cases in alkaline or neutral medium and takes place best at 37 C. As a routine procedure in the laboratory, I use neutral gelatin and incubate at 37 C. for from forty-eight hours to four days. The tube is placed in ice water to harden the gelatin and then examined for liquefaction or non-liquefaction of the medium. The method has given far better results, and what is of most importance, it is the only way to eliminate gelatin-liquefying growths which at from 20 to 22 C. in the acid gelatin do not produce proteolysis and are often mistaken for *B. coli communis*.

The classification of cholera spirilla into species, causing rapid, slow, slight and very slight liquefaction, I believe to be only a matter of reaction of the medium and temperature of incubation. In case of a number of laboratory cultures as well as six others isolated from the Schuylkill River, tested after growth in neutral gelatin at 37 C. for from forty-eight hours to four days, the liquefaction was complete; but it was only partial when the organisms were kept in other cultural conditions.

C. AMOUNT OF GAS.

It is regarded as characteristic of *B. coli communis* that there should be produced from 50 to 75 per cent. volume of gas in the closed arm of the fermentation tube in from twenty-four to forty-eight hours (of which the relation of hydrogen to carbon dioxid is represented by the formula $H : CO_2 :: 2 : 1$ also that the fermentation is usually completed in twenty-four hours at 37 C. I have observed, however, cultures of *B. coli communis* recently isolated from water producing no gas at all in twenty-four hours and after forty-eight hours at 37 C. only 15 per cent. The relation of hydrogen to carbon dioxid just mentioned may be regarded as correct, but it is by no means constant and reliable, a formula $H : CO_2 :: 3 : 2$ being even more frequently obtained, and formulas such as 3 : 1 or 4 : 1 or even higher may be observed according to the time at which examination is made. If cultures are closely observed it will be noticed that after twenty-four hours, when the gas formation is stopped, a gradual reabsorption of the carbon dioxid by the medium takes place, and the result gives an apparent excess of hydrogen. Further, when the sodium hydroxid solution is added to absorb the carbon dioxid a partial vacuum is produced and should the mouth of the fermentation tube be imperfectly closed by the thumb or by a rubber stopper, access of air is permitted and the results may fail to show any carbon dioxid at all. It is possible, therefore, from conditions in which the culture is placed or from failure in the technic to obtain a typical colon bacillus gas formation from an organism which under more careful observation would show the contrary.

The above features are presented in order to show that the irregularities obtained in cultures are not due to different types of the colon bacillus, but to the conditions under which the culture is grown, or to imperfect technic, and to indicate that the organism should be regarded as essentially a monotype bacillus and not as a group.

DIFFERENTIATION REACTION.

With this view in mind, an attempt was made to find some reactions to serve as constant and reliable means of differentiation. After a series of tests, it was found that if, in each of a number of tests, about 0.25 c.c. to 0.5 c.c. of a forty-eight hour culture of various organisms on 1 per cent. dextrose bouillon was rapidly boiled

in about 5 c.c. of a 10 per cent. solution of sodium hydrate, there will appear immediately after boiling a clear yellowish-lemon color in the tubes of *B. coli communis* (similar reaction is obtained also with the uninoculated control 1 per cent. dextrose bouillon); while in others, as an indication of the absence of this micro-organism, the solution will remain clear and colorless, taking on a slight pinkish color after five or ten minutes; this reaction I have arbitrarily called Test 1.

In another and independent observation conducted in other cultures isolated also from water, I found that if about 1 c.c. of a 10 per cent. solution of sodium hydrate and then about 1 c.c. of a 50 per cent. solution of sulphuric acid be added to the cultures, some tubes will remain colorless, while others will take on a purple reddish coloration either at once or within a few minutes. Closer study of this reaction showed this to be positive as soon as a growth was apparent in the medium, even as early as four or five hours incubation at 37 C. in neutral bouillon; and further investigation indicated that this purple coloration with sodium hydrate and sulphuric acid was characteristic of the *B. coli communis* cultures (Test 2).

This test shows the color reaction on the addition of acid and its disappearance when alkali is added in excess; this is a direct reverse of the color reaction of Test 1—in which the color is discharged by acid and reserved by alkali. The color in Test 2 is not produced in the presence of sugar. It is apparently related to the presence of indol or some indigo deriviation. Test 1 seems to depend on the biologic action of the bacteria on the sugar, while Test 2 depends on the action of the *B. coli communis* on proteid substance; and the striking and ready production of these color reactions aid materially in facilitating the differentiation of bacillus coli. Further study is in progress to determine the nature of these reactions.

ACTION OF THE COLON BACILLUS ON SUGAR.

It was deemed desirable to avoid experimenting in this connection with the different kinds of sugars, as dextrose, lactose, saccharose, fructose or mannite, etc., since while such study undeniably is of scientific interest, the multiplication of these sugar-media opens the chance of too ready and disastrous confusion of results; based on the fact that any saccharolytic micro-organisms having the power of splitting other sugars have, in my work, never failed to attack dextrose, my observations were made on cultures in media containing this sugar alone. *B. coli communis* was incubated in a 5 per cent. dextrose bouillon, and the culture daily examined polariscopically for the exhaustion of the sugar in the medium. It was found that the sugar after forty-eight hours remained the same as after twenty-four hours: in other words, that the bacillus showed but a weak sugar-splitting power, the saccharolytic action ceasing after twenty-four and sometimes after eighteen hours. With this fact in view, established by identical results in a number of experiments on the same line, it was thought well to make the same observations with other cultures which also possessed saccharolytic activity, but which gave atypical reactions for *B. coli communis*. From a number of such strains in the laboratory, one was selected and incubated in 5 per cent. dextrose bouillon and daily polariscopic examination pursued as in case of the true colon bacillus above mentioned. In this instance the sugar was found to be considerably diminished after from eighteen to twenty-four hours, and to have disappeared entirely from the medium in from two to three days at 37 C. The results in tabular form were as follows:

	Per cent.
Control sterile dextrose bouillon	1.17
Bacillus coli culture after 24 hours at 37 deg. C.	1.01
Bacillus coli culture after 48 hours at 37 deg. C.	1.01
Bacillus coli culture after 72 hours at 37 deg. C.	1.01
Allied species culture after 24 hours at 37 deg. C.	0.66
Allied species culture after 48 hours at 37 deg. C.	0.18
Allied species culture after 72 hours at 37 deg. C.	0.00

These results, indicating the more complete saccharolytic ability of this allied species than that of *B. coli communis*, gives a constant feature of the various species in the group of micro-organisms liable to be confused with the colon bacillus, another reliable differential test. In order to avoid the necessity for polariscopic examination of the cultures, a series of investigations, in which Fehling's solution was employed was pursued. The cultures as before were tested after twenty-four, forty-eight and seventy-two hours incubation at 37 C., the Fehling's solution was diluted with equal parts of water, as usually done in qualitative examinations of urine for sugar, and divided among a number of small test tubes, 1 c.c. being placed in each. To these the culture was added in increasing amounts, beginning with one, two, three, etc., drops up to 1 c.c.; and the mixture then boiled. The result was striking. The controls or non-incubated medium gave positive sugar reactions with one or two drops according to the percentage of sugar in the material; cultures of the colon bacillus gave positive reactions with about twice the amount added as in case of the controls—two or three drops; while the allied species failed to show reduction of the copper even after the addition of as much as 1 c.c. of the culture. Often tests were conducted with different proportions of dextrose in the medium, from 0.1 per cent. to 5 per cent. dextrose bouillon and, after forty-eight hours' incubation at 37 C., the differentiation was the most typical.

These findings have been confirmed in routine examination of a great number of cultures obtained from water and other sources during the past three years during my connection with the Filtration Bureau of Philadelphia and later with the State Department of Health Laboratory in the University of Pennsylvania Pathological Laboratory; cultures answered fairly to the characteristics of *B. coli communis*, in no case showing exhaustion of the sugar save in a few exceptions which on further investigation proved to be impure.

In view of such results, I have tentatively proposed for that group of organisms which present characteristics similar to that of *B. coli communis*, but not corresponding completely to this organism and which are commonly spoken of collectively as the "colon group," the substitution of the name "the saccharolytic group," the name being based on the splitting action manifested by them for dextrose. The leading features of this saccharolytic group may be said to consist of their powerful action on dextrose, their usual failure to produce indol and their tendency to cause liquefaction of gelatin. In the group, however, are a few individual types which fail to liquefy gelatin and a few which will produce indol. The separation of such examples may, however, be definitely made by the colorless to pinkish color reaction of Test 1, or by the absence of the purple reddish color reaction of Test 2, as above described, and by the test of their exhaustion of sugar from a 1 per cent. dextrose bouillon medium after incubation for forty-eight hours at 37 C. (Test 3).

Being convinced of the importance of this strong sugar reaction of the saccharolytic group and its absence in case of the colon bacillus, an investigation was made to determine the actual explanation of the difference thus manifested. Two suppositions were considered: First, that *B. coli communis* may possess slower actions on the sugar; or second, that it produces some substance which inhibits the saccharolysis which would otherwise proceed as in the saccharolytic group. Both types of organisms begin to form gas at about the same time, but the colon bacillus produces gas more slowly than the group of allied species and its gas production ceases after from twenty-four to forty-eight hours. The saccharolytic group, on the contrary, after beginning about the same time as the colon bacillus to produce gas, continue more rapidly and do not cease until the sugar is entirely exhausted, the duration varying with the percentage of sugar in the medium. At the same time it was found that the acidity of the medium was greater with the colon bacillus, which produced from 3 to 5 per cent. in forty-eight hours; while the saccharolytic group produced only from 1 to 3 per cent. in the same period. This difference suggested that the greater acidity of the medium in case of the colon bacillus may exert an inhibitive influence on the further action of the organism on the sugar. By adding a few grains of sterile calcium carbonate to the cultures after the fermentation had stopped and absorption had begun, with the effect of neutralizing the media, it was found in confirmation of this supposition that more gas is evolved and the sugar further diminished (even to exhaustion). As suggested by Dr. Smith, the acidity of the culture was found to be due to the presence of lactic acid.

Before concluding I would like to point out briefly that, in view of the apparent variations of *B. coli communis*, Booker recognizes seven varieties of organisms of the colon group resembling the colon bacillus morphologically and biologically (but with no especial mention of the production of indol): that Gilbert describes five types: (a) non-motile but otherwise typical colon bacillus, (b) non-productive of indol, but otherwise typical colon bacillus, (c) non-fermenting lactose, but otherwise typical colon bacillus, (d) non-motile and non-fermenting lactose, but otherwise typical colon bacillus, (e) non-motile non-fermenting lactose, non-productive of indol, but otherwise typical colon bacillus; that Fremlin regarded fermentation of dextrose and coagulation of milk as the most reliable indication of *B. coli communis;* that others regard the fermentation of dextrose alone as sufficient evidence of the identity of this bacillus. It is remarkable to note the elasticity of colon bacillus as disguised at present under the name of "the colon group." This elasticity is due, however, to the general conception of the colon group, a term used to cover all bacteria from the true *B. coli communis* to the *B. typhosus,* and the failure of many observers to realize the individuality of the various members of the chain. Careful controlling of all colon-like organisms with the two-color and sugar-exhaustion tests will serve to limit names, and it is with the hope of establishing a clear identity of this important indication of sewage pollution that these methods are offered.

CONCLUSIONS.

From the above I believe the following conclusions to be logical:

1. The saccharolytic group, as its name implies, represents not only one but different kinds of micro-organisms commonly found in nature, especially in water, characterized by its predominating action in splitting dextrose.

2. The constant occurrence of this group in water may prove to be a factor in itself which may shed a new light on our vital problems of the bacteriology of water.

3. The *B. coli communis* must not be confounded with the colon group, which I name "saccharolytic group," holding that this group should have no relation to the colon bacillus.

4. Since the saccharolytic group is shown to be more closely related to what at present is regarded as the colon group, the substitution of "saccharolytic group" for "colon group" is more comprehensible, and I hope will aid considerably, not only in relieving the confusion which the colon group presents, but especially in establishing the colon bacillus as a distinct type of micro-organism and not an indefinite chain of them, as it is considered at present.

5. *B. coli communis,* in addition to the recognized characteristics, will be positive to Test 2 and negative to Tests 1 and 3 (that is, it will fail to exhaust the sugar in 1 per cent. dextrose bouillon at 37 C. in forty-eight hours), while contrary to this the saccharolytic group may in many ways present characteristics of the colon bacillus, but will always be negative to Test 2 and positive to Test 1 and Test 3 (that is, it will exhaust the sugar in forty-eight hours at 37 C. in 1 per cent. dextrose bouillon).

6. *B. coli* should be discarded as an agent for exhausting the sugar in the meat juice and one of the saccharolytic group should be used instead.

I desire to extend my appreciation and most sincere thanks to Dr. Samuel G. Dixon, commissioner of health of Pennsylvania, for his valuable criticisms on this paper; to Dr. Allen J. Smith, professor of pathology, and Dr. John Marshall, professor of chemistry of the University of Pennsylvania, for their personal interest and valuable suggestions, and to Dr. Herbert Fox, chief of the laboratories, for his valuable assistance during the progress of this work.

PSYCHOTHERAPY, WITH SOME OF ITS RESULTS.*

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In the term psychotherapy I include all forms of mental treatment, whether accompanied by hypnosis or without. The hypnotic state is not primarily the result desired, but the receptive condition induced by that state, in order that the curative suggestion given may be accepted without interference from the objective self. Hypnosis of itself without suggestion never accomplished anything, the forceful directions given the patient during the responsive state of hypnosis achieve the results.

There is a great deal of discussion at present as to the relative value of so-called hynotic treatment and suggestive or psychic treatment without hypnosis, the discussors apparently losing sight of the fact that in all the various methods of mental therapy it is the same underlying principle—suggestion, or a command to the subconscious mind, and acting through the same brain—that produces the desired effect. The modern teaching that we must treat the patient and not the disease only

* Read before the New York Neurological Society, Jan. 7, 1908.

must be rigidly applied in mental therapeutics. Therefore, the individual determines, in a great degree, whether the method used is the form of psychic treatment of which Dubois has written so entertainingly, and which he chooses to call "persuasion" rather than suggestion, or whether the analytical method or the state of hypnosis in one of its many phases, is best employed. There are many people who are "persuadable" or "suggestible" in the waking state, and for those it is entirely unnecessary to produce hypnosis, but there are equally as many who are so deeply possessed by their own beliefs and opinions regarding their physical condition, that no amount of persuasion or suggestion during the normal consciousness will affect their autosuggestions. Something depends also on the nature of the trouble for which relief is sought, for there are certain conditions that can not be gotten rid of except under hypnosis.

The induction of the hypnotic condition is valuable in these cases because of the heightened receptivity produced and the passive condition of the patient's autosuggestions, which in the waking state frequently entirely overcome any curative suggestions from the physician.

Very often, however, it is impossible to say whether the patient is in a state of hypnosis or not, the only evidence being the sensation of calmness and well-being following treatment, and the prompt relief of the pain or other symptoms. Obviously, the physician does not experiment with the individual to find out the depth of the sleep; the entire time being occupied by vigorous suggestions toward the relief of his condition.

The patient's evidence is of no value because of the widespread idea that unless amnesia is present he is not affected and, according to European authorities, including Bernheim, Forel and Moll, although 95 per cent. of all people are hypnotizable, only 13 per cent. are amnesic on waking. In my practice only about 10 per cent. of my patients experienced loss of memory, the others all declaring that they heard everything and were conscious of their surroundings, but, as several expressed it, did not care to exert themselves and felt that to do anything was too great an effort.

That the suggestible state, in greater or less degree, is inherent and producible in the majority of people I think admits of no argument. Indeed, the authorities already quoted agree that the physician who can not influence 90 per cent. of his patients is not competent to criticise psychotherapy. While my own percentage does not run quite so high as that, my failures, I am persuaded, have been due to faulty technic or lack of patience on my part. And this, I believe, is the greatest difficulty with many American physicians, who make a spasmodic attempt to use suggestive treatment, meet perhaps at first with indifferent success, and then cast the whole subject aside as valueless. Some have gone so far as to assert that the treatment may be applicable to Europeans, but can not be used successfully with our high-strung, intelligent American people. It is apparent that this statement is made without proof or adequate ground for the opinion.

Where are the physicians in this country of equal standing with those of Europe who have devoted themselves to the practice of hypnotic or psychic treatment and who have any reliable statistics that they can produce? An occasional sporadic case which has been treated by every possible method unsuccessfully before suggestion is tried, as a last resort, and which perhaps does not show immediate response, is certainly not sufficient evidence on which to base an opinion as to the suggestibility of the American people.

In my experience with suggestive therapy during the past six years, and during the last two, its exclusive practice, I have found that the most intelligent Americans yield more readily to mental treatment than the foreign-born clinic patients.

There is no question, however, but that there is as much variability in the suggestibility of individuals as there is in their varying temperaments and characters. When physicians study the effect of mental conceptions on the body, and apply themselves as earnestly and as enthusiastically with the treatment by mental methods as they do in experimenting with a new drug or serum, they will be in position to state definitely the relative suggestibility of our own countrymen.

My method of treatment is based on that of Bernheim and Leibault, and I follow very much on the plan of Bramwell in that I always give my intelligent patients a preliminary explanation of what I expect, the probable sensations they will experience the first time, and the fact that sleep, as generally understood, is not necessary in order to experience the benefit of the treatment.

There are two distinct types of patients; the one who is afraid he will go to sleep, and the other who is afraid he will not. Both of these have to be met and dealt with accordingly. The former after a few simple explanations usually lose this feeling. The latter class are perhaps a little more difficult because as a rule they have fixed ideas as to the only way in which they can be helped, and if they are not conscious of being asleep and amnesic they will declare that they are not influenced at all, and by their own strong autosuggestion in many cases will counteract the physican's influence.

In a few of these cases, when reason could not be used, I have employed hypnotic drugs for their quieting influence and to heighten the verbal suggestion. In all I have used these drugs about six times, giving either bromid or paraldehyd. The results have been favorable in all the cases except one insomniac patient, and in that case I could neither influence the patient with drugs or without, and apparently made no impression of any kind.

It is not wise to use drug therapy at the same time as suggestive therapy, for the divided attention of the patient seems to weaken the suggestive effect, and for that reason I never combine the two unless it is especially indicated, or is merely the prescribing of a simple tonic, the effect of which I explain to the patient.

Without dealing any further in generalities I wish to present three definite cases drawn from my own practice which illustrate the success that has been obtained by the use of this method of treatment. In presenting these cases I desire to direct attention to the fact that all possible physical means of treatment had been tried over a long period of time without results.

It is often stated by the opponents of psychotherapy that "other means" will relieve the condition, and, therefore, there is no need to resort to this method. But the facts are that hypnotic and psychic treatment have made their way only through the failure of the "other means." Even now there are few physicians practicing psychic therapy whose patients have not exhausted every method known to the pharmacopeia and often surgery besides, before coming to them.

I have no desire to thrust forward any claim for sug-

gestive therapy being a panacea or specific for even all functional diseases or all so-called incurables, but merely to call attention to the fact that many obscure conditions and functional diseases are cured by this means, and no physician has done his whole duty by his patients who allows them to drift out of his influence and often into the hands of self-styled "healers" of various cults, without having recourse to psychic therapy in competent medical hands.

CASE 1.—Psychasthenia of strongly obsessive type. This patient first consulted a prominent New York neurologist a year previous to coming under my observation. Some months later he was seen by Dr. Charles L. Dana, examined by him, and kept under his care for a time. Dr. Dana then referred him to me with the above diagnosis. He consulted me on Nov. 28, 1906. The history is as follows:

Patient.—Male, aged 28, college graduate, analytical chemist by profession, had never had any physical illness except a catarrhal condition of the middle ear resulting in slight deafness six years previous.

Family History.—No alcoholism or insanity. Father is a well-balanced, intellectual man, free from any nervous trouble. Mother has had slight headaches and occasional fits of depression. There are four brothers and one sister in the family. Of the brothers, three of them are suffering from nervous breakdown.

Personal History.—The condition of my patient can best be briefly described by giving his own analysis of himself, written to me just before he presented himself for treatment:

"A young man at 28 finds himself a prey to his morbid feelings and emotions. Is unable to concentrate his thoughts on anything except himself and his incompetency. The most trivial act, such as posting a letter or dressing himself, is a great effort and is thought over and dreaded before he can force himself to perform it.

"He is still working, but knows he can not continue much longer, and is in constant fear of losing his position. Has no ideals or normal emotions. Would not care if his mother died to-night. Would forget it the next day. Is absolutely selfish and self-absorbed. Is oversensitive and self-conscious, a slight deafness accentuating this natural tendency. When compelled to go among people is in agony and imagines every one is criticising and noticing him.

"Has no bad habits or sexual perversions as yet, but is constantly haunted by the dread of them and feels that he can not resist much longer. His will is weak and he cares nothing for others' most sacred feelings. He is wretched himself and a detriment to others, and ought to be put out of the way, but is too weak morally to do it himself, although suicide is a constant thought. This condition has gone on for years, ever since leaving college, constantly increasing in severity until the present time, when he feels that insanity is the logical outcome, if not already present."

Examination.—This young man presented himself at my office three days after writing this letter. He was in a tense, highly nervous state, very depressed and hopeless over himself. The neurologic examination showed nothing abnormal except slightly exaggerated deep reflexes. He was insistent over the necessity of being placed absolutely under hypnosis. He was convinced that Dubois' psychic treatment, of which he had read, would be of no use to him, and was in the greatest fear that he could not be put to sleep.

Treatment.—Owing to his agitation and intense anxiety I was very doubtful of being able to induce the hypnotic condition, and realizing that the failure to do so at this first attempt would probably deepen his fear and increase the difficulty, I gave him 30 grains of paraldehyd just prior to commencing hypnotic suggestion. He passed into a perfectly quiet restful state, was able to respond to my questions, but was entirely passive unless forced to answer. He was given vigorous suggestions for over half an hour, was left in this condition for about two and one-half hours, and then awakened. He expressed himself as feeling calmed and refreshed. On all subsequent visits the drug was omitted, but he was quite suggestible and slept quietly for over two hours each time. This treatment was continued three times a week for the first month, then twice a week for the next month. After that he came irregularly, when he felt the need. This resulted in about three visits in the third month.

Result.—At the end of the second month he told me that he was able to concentrate his mind on his work, and it had never been so satisfactory before; that he was now able to control his thoughts, and that his different attitude and appearance had been commented on by many of his friends. I saw him once during the summer and he stated that he was entirely free from morbid thoughts and felt perfectly normal for the first time in years. He is now engaged to be married and is leading a perfectly normal life.

CASE 2.—Idiopathic insomina.

Patient.—R. E., male, aged 37, writer by profession, consulted me Jan. 6, 1907. Family history was negative.

Personal History.—He gave a history of sleeplessness dating back seven years. He had never had any trouble of this kind until he occupied a position as night editor of a daily paper. During this period his heaviest work occurred between 2 and 5 o'clock in the morning. He was a poor sleeper during the day, and finally gave up the position on account of this inability to sleep soundly during the day and because of his nervous, exhausted state. He found, however, that he could no longer sleep at night, although he would occasionally fall asleep on first retiring, but never slept more than an hour and then remained awake until after 4, when he would obtain another short sleep until 6 o'clock, at which time his business necessitated his rising. He commenced to take various hypnotic drugs, and had run through the usual list; he was on veronal when I saw him and was taking 20 grains about every third night.

Examination.—In appearance this man was very pale, thin and anemic. He had dark heavy circles under his eyes and looked strained and worn and was mentally despondent and depressed. The physical examination revealed nothing abnormal. He was greatly troubled with severe constipation, which had been present many years, and every day took an enema or a laxative drug.

Treatment.—This patient, on beginning treatment, was instructed to cease taking laxatives, because, as a rule, the restoration of the normal bowel function is most easily affected by suggestion, and the confidence of the patient is gained if he can see some immediate result of the mental therapy. He was treated three times a week for four weeks, but at no time was he deeply asleep and none of the phenomena of hypnosis was present, although sleep suggestion was always given. The suggestions were directed not only toward the relief of the insomnia, but also for constipation.

Result.—He commenced at once to have a normal daily movement of the bowels. The first night after suggestion had been given he slept for seven hours, the second night for five. He also slept well the night of the second visit, but the following night was a poor one. After the third treatment he again had two good nights, only waking once or twice and going to sleep again. During all this time he was entirely without drugs. During the balance of the month he had three poor nights. The rest of the time he was sleeping normally. His constipation was entirely relieved. He reported to me five weeks after his discharge that he had thirty consecutive nights normal sleep. I have since heard from him and he has remained entirely free from his old trouble.

CASE 3.—Spasmodic stricture of the esophagus.

Patient.—F. B., male, aged 32, an electrician, consulted me March 16, 1906. Family history was negative.

Personal History.—Previous to his illness he had been a bicycle pacemaker for three years. He had always been well up to time of onset of present illness, which occurred when he was 20 years old. The attack was sudden. He had been feeling nervous and exhausted for two or three days. The spasm of pharynx and esophagus occurred first while attempting to eat a piece of bread and was accompanied by regurgitation and vomiting and by a sensation of violent choking. These attacks occurred whenever he attempted to eat solid food, and he went to the Massachusetts General Hospital for several

weeks. He left there without benefit and drifted from place to place for some years. The condition persisted and grew worse so that the attacks came without the provocation of solid food and he now lived entirely on liquids. In the hospital at Rochester, where he spent several weeks, the relaxation and contraction of the muscles produced a rhythmical sound like the ticking of a watch, so that he was nicknamed the human Waterbury watch. From Rochester he returned to New York City and spent the last five years here, during which time he has visited most of the clinics and is known to many physicians.

For many years he carried with him a rubber catheter which he has been in the habit of pushing down the esophagus to relieve the contraction sufficiently to permit the outflow of the contents of the stomach when the spasm would be relaxed. The patient is unable to lie down to sleep at night, the lying posture inducing an attack, and for a year and a half the only sleep he has obtained has been while sitting in a chair.

Examination.—This patient was referred to me in March, 1906, by a physician to whom he had gone for relief during one of the severer attacks. At that time he presented all the appearances of malnutrition and loss of nervous control. He was emaciated—weight, 120 pounds—there was trembling in his limbs, and he alternately wept and smiled in a meaningless way.

He had a rapid pulse and seemed constantly in the act of swallowing. There was clonic contraction of the pharyngeal and laryngeal muscles which threw the thyroid cartilages forward into great prominence. The muscles on each side of the neck were tense and stood out markedly. Examination of the nervous system was negative except for exaggerated reflexes. No sensory disturbances were present and the cranial nerves were normal.

Description of Attack.—During an attack the spasm commenced in the pharynx and descended down the esophagus until the stomach was reached when a violent contraction of the upper abdominal muscles took place, forcing the contents of the stomach upward. Occasionally the stomach contents would be forced through the pharyngeal stricture, but usually the catheter was used by the patient to force an opening. When the spasm was induced by attempting to swallow a solid, the bit of food was grasped firmly by the muscles and held so that without recourse to mechanical means the irritating substance could neither be forced down nor brought back and the catheter was again used for this purpose.

Treatment and Result.—From the history and appearance and absence of symptoms of organic disease I made a diagnosis of esophagismus, and proceeded to treat him by suggestion during hypnosis. His report after the first treatment was that he had gone from my office and eaten heartily of eggs and toast and that he experienced no contraction or difficulty in swallowing. He had gone to bed that night, slept soundly and was feeling much better. The second treatment was given four days later with an equally favorable report. In all he had at this time five seances covering a period of three weeks. In this time he had a return of the attacks on three different occasions. His sleep had become normal, however, and he was eating regularly solid food.

At this time I lost sight of him for a period of seven weeks, when he returned with the report that the spasms had returned during the last two weeks, although not so severely as formerly. He had been living a very irregular life, working all night and sleeping in the day. This time I treated him on the same lines, but treated him every day for the first week and twice during the second week. At the end of that time he was feeling entirely well again and eating regularly without difficulty.

He disappeared once more, but I received a note from him two months later, stating that he had no further trouble and was well. I did not hear from him again until a few weeks ago, when he called at my office with the report that he had been entirely well ever since and could eat anything he chose without any recurrence of the spasm. His voice had deepened and his weight had increased to 139 pounds.

THE TREATMENT OF TYPHOID FEVER.

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CINCINNATI.

With the possible exception of tuberculosis, there is probably no disease which has been more widely discussed than typhoid fever. The discovery of its cause and modes of distribution, placing it in the list of preventable diseases, furnishes one of the most fascinating chapters in the history of medicine. The pathologic changes found are probably more widely known by the profession and the laity than those of any other disease, but there is still a great difference of opinion as to its treatment.

What are the indications for treatment? Rest for an inflamed or ulcerated tissue is a law in surgery. It applies as well to an inflamed or ulcerated tissue due to the specific poison of typhoid fever as it does to an ulcer of the stomach. The mere fact that the treatment is in the sphere of internal medicine does not justify the physician in ignoring surgical principles.

FOOD AND DIET.

Inflammation and ulceration mean deranged functional activity or its total abolition. Under these conditions frequent feeding is as illogical as it would be in acute gastritis or in ulcer of the stomach. To feed an adult in health every two hours from three to five weeks would impair the digestion of almost any one. To insist on it in typhoid, in the presence of an already impaired digestive process, with the bowel in a condition ranging from catarrhal inflammation to ulceration seems like setting at defiance surgery's first law.

The rapid emaciation in this disease is not due to lack of food, but to failure to digest and assimilate that which is taken. Lack of appetite and diarrhea are Nature's protest against its presence, her appeal that the doctor give the parts rest. When the most easily digested food fails, wholly or in part, of digestion, the fearfully and wonderfully constructed diet lists worked out by some leaders in the profession are not only an insult to the diseased bowel, but to the intelligence of the profession.

It has been urged that the diet should possess sufficient caloric value to compensate for the loss of weight due to the fever, a theory which ignores the fact that the area of food absorption is the very part affected by the typhoid process. An increase in the amount of food taken in typhoid fever no more insures the utilization of its caloric value than would the forced stoking of a defective furnace insure the utilization of the caloric value of the fuel used. Howell says: "It is not what we eat, but what we digest and absorb that is nutritious to the body."

In typhoid fever the ability to digest and absorb food should be our guide, not the amount of tissue waste. We should get rid of the débris before beginning to rebuild. An increased amount of food over that possible to assimilate adds fuel to the fire, and is much like attempting to place a new roof on a house while it is still burning. Is it not reasonable to believe that an excess of food may defeat the object for which it is given? It furnishes much more culture field for the growth of other bacteria in the bowel, increased fermentation, still greater disturbance of function and a decreased absorption.

REST.

While the profession is a unit in prescribing rest for a typhoid patient, it is far from being a unit in specifying how complete it shall be or how best it can be obtained. It should mean rest for all the body, not a part of it; rest for the brain, heart, liver, kidneys and digestive tract. These are the parts that bear the brunt of the fight. Rest to the arms, legs and trunk is assured, once the patient takes to his bed. Rest for the brain demands freedom from visitors, a minimum amount of house furnishings to suggest hallucinations and delusions, and the services of a nurse who has an accurate conception of the relative value of speech and silence.

There are people who feel that they must see every one of their friends who are ill. Too many of them derive a morbid pleasure from the recital of cases that have resulted disastrously, and the greater the disaster the more acute the pleasure in its recital. Their conception of a bird of paradise seems to be a croaking raven and the more it croaks the greater their admiration becomes.

"Sitting up at night" with a patient desperately ill is one of the customs of "the good old days" now happily almost obsolete. A delirious patient, a hot stuffy room, a stinking kerosene lamp, and a half-dozen neighborhood gossips sitting 'round conversing in rasping whispers, making mental notes in order that they may be able later on to accurately describe just how hard the patient died, furnishes the stage setting for a miniature hell on earth.

Rest for the digestive tract means a minimum amount of food to handle. Rest for the liver and kidneys, a minimum amount of functional activity. Rest for the heart, the absence of drugs, especially alcoholic ones, that paralyze its muscle, or by dilating the vessels and reducing their tone greatly increase the total area of the circulation.

USE OF ALCOHOL.

A question of vital importance in the management of this disease, and one on which the profession is divided, is the use of alcohol as a stimulant or as a food. Kerr, in his article on "Alcoholism and Drug Habit," says:

> Alcohol is an irritable narcotic paralysant . . . the first effect is vascular relaxation . . . vasomotor paralysis causing reduction of the nervous control over the vessels, the dilatation extending through the vascular system to the brain . . . the first stage is one of paralysis. The vasomotor nerves have been paralyzed, their capacity has been reduced, their vigilance relaxed . . . it is the most powerful waster of inhibitory force . . . it is conveyed to the brain through the circulation. By paralysis of the vasomotor nerves, control over the vessels is relaxed, causing their dilatation with an increased supply of blood to the brain. The result is temporary functional, cerebral excitement. The vascular contractility having been reduced by the alcoholic vasomotor paresis, the increased blood supply can not be sent back from the brain rapidly enough, and a block of the circulation occurs which impedes a renewed supply of freshly aerated blood. This is the period of depression, weariness and dulness. By its direct poisoning action, by its lessening and vitiating the blood supply to the brain and nervous centers, secondary poisons are retained in the blood.

In all inflammatory processes the vasomotor system is in a state of paralysis more or less profound. Is it logical in typhoid fever, where this condition obtains throughout the course of the disease, to accentuate that condition by the administration of alcohol at regular intervals? Since discontinuing its use in all cases at all stages of the disease, delirium has almost disappeared as one of its clinical symptoms. Is it unreasonable to infer that this symptom in the past may have been a manifestation of alcohol? That it does not stimulate the heart muscle is proved by Richardson, who demonstrated in his experiments that it caused over 12,000 extra heart beats in twenty-four hours. The fear of death through heart failure is based on very poor clinical evidence. Death from heart exhaustion in an uncomplicated case of typhoid fever is almost unknown, and when occurring because of some complication must not be attributed to the typhoid poison, but to the complication.

Occurring in a case receiving the so-called stimulating treatment by regular doses of alcohol, in the absence of hemorrhage, perforation or the inflammation of some important organ, it does not seem unreasonable to attribute heart failure in such a case to the paralyzing action of alcohol.

During the so-called crisis, when convalescence is about to be established, when the vasomotor system is beginning to regain control, and when restoration of the diseased tissues to the normal is a natural sequence, this must be delayed if the vasomotor paralysis is continued artificially by the use of alcohol.

Leucocytosis is not present unless due to a complication. On the contrary, the number of leucocytes is below the normal. The importance of the leucocyte in combating inflammatory conditions is recognized by all. Recently it has been claimed that alcohol paralyzes the leucocyte. If this is true, the physician who administers alcohol in this disease is paralyzing his best friend. Another symptom that has practically been eliminated from the clinical history of typhoid fever by the withdrawal of alcohol, is vomiting. When its local irritant action on the gastric mucous membrane and the delay in digestion which its presence causes is considered, the absence of this symptom is readily explained. When we recall its local irritant action on the liver and kidneys in health, it is unreasonable to believe that it can accomplish anything but harm if given when their cells are in a state of parenchymatous degeneration caused by the poison of typhoid.

Elimination of the products of retrograde metamorphosis is one of the cardinal indications in this disease. Any treatment that not only loses sight of this indication, but positively places an obstacle in its way, jeopardizes the life of the patient.

Its local irritant action on the gastric mucous membrane, the delay in the digestion of other food that its presence causes, its paralyzing action on the vasomotor system and on the heart muscle, its tendency to produce delirium and vomiting, and the embarrassment of function which its presence causes to the excretory organs, form a group of objections which can not be charged against any other article of diet liable to be used in typhoid. The possibility of exchanging a typhoid fever for a chronic alcoholism should be borne in mind.

The tendency in this disease is to recovery. It is self-limited and dangerous to life almost wholly because of the multiplicity of its complications. If we were able to eliminate hemorrhage, perforation and the inflammation of important organs, typhoid fever would practically be without a mortality rate.

Almost every physician has his own way of treating the disease. Almost every drug in the pharmacopeia and a good working majority of those out of it has been

lauded as a specific in its treatment. The great majority of patients would get well if they never received a dose of medicine. It is a matter of history that the great majority recovered when it was popular to bleed to syncope and push mercury to salivation. Much of the medication practiced is made necessary by the attending physician's mistakes in feeding, or attempts at stimulation. Very often he is called on to neutralize conditions of his own creating. Polypharmacy is not only dangerous but reprehensible. The physician who writes a new prescription every time he visits a patient belongs to the kindergarten class in therapeutics. In a disease requiring from three to five weeks to run its course, a diet and a line of medication, based on an accurate knowledge of the pathology and of the action of the medicine used, should be adopted and no change made, unless indicated by some complication.

THE SICK ROOM.

The room should be free from pictures and bric-à-brac and should be well lighted. At night a dim light brings out objects in the room with an indistinctness that favors the production of hallucinations. I have had a patient complain of a face that was frequently appearing from behind a picture that hung on the wall near the foot of the bed. This hallucination promptly disappeared when the picture was removed. At night I have seen patients in a state of terror quickly quiet down after turning on a bright light.

In Saint Mary's Hospital there was a young German with typhoid. There had been no delirium and the fever was running a favorable course. One night when the lights were low he left his cot, ran to a window and plunged head first from the fourth floor, disemboweling himself on the iron fence below. Since my own attack I am able to understand something of the terrors that drive patients to throw themselves from their rooms. These instances illustrate the necessity of having a nurse on guard at all times. I believe that the increase in the fever at night, while partially explaining the greater tendency to delirium at that time, does not entirely explain it, and that the indistinctness with which objects are seen in a dimly lighted room is a contributing factor of very decided importance.

FEEDING.

In my wards in Saint Mary's Hospital where the great majority of the cases to be reported have been treated, milk has been practically the only food used. It has been given in half-pint meals, not oftener than once in four hours, and only four times in one day. At rare intervals it has been deemed expedient to change to malted milk or albumin water, and occasionally the addition of an equal quantity of some carbonated water has made the milk more digestible. This diet has been continued until the temperature has not gone above the normal for seven days. The only exception to this plan has been when an afternoon temperature above normal has been regarded as due to lack of food. After that period clear soups, soft boiled eggs and custards are added gradually, and their effect is closely watched. If no bad effects are noted, vegetables free from tough fibers, bread and butter and meats are added, and the patient brought back to a full diet in the course of ten days or two weeks.

He is allowed to sit up on the tenth or twelfth day for fifteen minutes, and the time each succeeding day allowed out of bed is double that of the preceding day until all of his time when not sleeping is put in about the ward out of bed.

ROUTINE MEDICATION.

The routine medication used in all cases has been one-tenth grain doses of the acetate of lead, dissolved in a teaspoonful of water, given every two hours. It is not my purpose to claim any specific action for this drug in typhoid. I believe that its action is purely that of an intestinal antiseptic; that it limits fermentation; almost wholly eliminates meteorism and diarrhea and in doing these thing encourages digestion and absorption of food and places the bowel in the best possible condition for recovery. The possibility of inducing lead poisoning by the frequent repetition of small doses over a considerable period of time was not lost sight of. In no case did any symptom arise indicating its poisonous action. When the diarrhea was obstinate the dose was increased to a tenth, every hour, and such changes as seemed indicated were made in the diet. It has been our custom to continue its use until convalescence was assured.

No attempt has been made to reduce the fever unless it reached 103 F. The routine treatment has been the administration of acetanilid in two-grain doses, repeated often enough to bring the temperature below that point. In only one case was its use contraindicated by cyanosis. In the great majority of cases its beneficial action has been noted by a fall in temperature and a slowing of the pulse rate. Occasionally cold water injections into the bowel have been resorted to and always with gratifying results. Cold sponging was used at rare intervals. In no case was a patient placed in a cold bath. Until some method of treatment is discovered that will be to the typhoid bacillus what quinin is to the malarial parasite, attempts at intestinal antisepsis having for their object the destruction of the bacillus will fail of accomplishment.

The exact value of treatment with bacterial vaccines guided by the opsonic index has not been determined. There are many obstacles to be overcome before this method of treatment can be adopted, even if later investigation establishes its value.

In treating cases complicated by hemorrhage, the physician has an ally in Nature he can neither afford to ignore nor embarrass. A considerable loss of blood is quickly followed by reduced temperature and lowered blood pressure, the last named condition being Nature's first step in repairing the break in the vessel wall by favoring the formation of a protecting clot. At this stage all methods pursued with the object of increasing blood pressure or the volume of blood encourage more bleeding. Heart stimulants and hypodermoclysis are logical methods of treatment in cases of hemorrhage where the bleeding vessel has been tied; they are as positively contraindicated in cases where the only hope of no more hemorrhage is based on the retention of the clot in the ruptured vessel wall.

Experimentally, it has been demonstrated that the presence of soluble calcium salts is essential to the coagulation of the blood. This has given rise to the calcium chlorid treatment in cases of hemorrhage. Calcium chlorid is administered in ten-grain doses, repeated every hour or two, and continued for several days after all hemorrhage has ceased. Absolute rest and the withholding of all food and water for at least twelve hours is imperative. Occasionally a case has seemed to need some stimulation because of irregular heart action, pro-

found prostration or subsultus tendinum. In these cases strychnin, in doses ranging from 1/100 to 1/60 of a grain, has been given and repeated every hour until the desired effect is produced, and then discontinued. In no case has alcohol been used. I believe it contraindicated at all stages of the disease. If the fever be controlled, the diet limited and made to suit the individual case, and the administration of medicine reduced to a minimum, stimulation will seldom be necessary.

Severe headache has yielded in a number of cases to hypodermic injections of ergot. It probably acts by decreasing the caliber of the blood vessels in the brain, thereby relieving congestion.

Vomiting usually means irritating food or medicine or the local irritant action of alcohol. When present the physician should discontinue the offending substance. The most effective treatment is complete rest of the stomach for from twelve to twenty-four hours.

Excessive diarrhea usually means the presence in the bowel of undigested food or of an excess of food. In either case the indications are for a change of diet, either in form or quantity, and a gentle cathartic to rid the bowel of the offending material. Opiates are contraindicated not only because they retain this irritating material in the bowel, but because they check secretion and embarrass the excretory organs. Paralyzing with opium a bowel favors the retention of accumulated material and is not aiding Nature. Opiates, while they temporarily decrease the number of movements, add to the load to be carried. Diarrhea is Nature's method of ridding herself of this irritant material and the aid offered in the cases reported has been small doses of castor oil, a teaspoonful, or from a fifth to a half grain of calomel.

In pleurisy and pneumonia, numerous dry cups applied over the chest, and frequently repeated, relieve the pain more quickly than morphin, and have none of the disadvantages attending the use of that drug. Two cases, one in hospital, the other in private practice, in which a lobar pneumonia was followed by a perforation of the bowel, have caused me to view with great anxiety the development of pneumonia as a complication. Were they simply coincident or does pneumonia render perforation more liable to occur?

The liability of a pleuritic effusion to become purulent or of a latent pulmonary tuberculosis to become active should not be lost sight of. Patients profoundly under the influence of the poison may not complain of a pleuritic pain. A disturbed pulse respiratory rate has in the majority of cases pointed the way to a correct diagnosis.

Inflammation of the parotid in the majority of cases means a neglected mouth. Frequent washing with normal salt solution and a daily scrubbing of the tongue with a tooth brush will do much toward avoiding this complication. Pilocarpin, 1/40 to 1/20 of a grain, repeated often enough to start the secretions and induce gentle perspiration, has prevented suppuration in some cases. When pus has formed, delay means sepsis, a free incision provides drainage.

Perforation demands an immediate operation.

The total number of cases treated was 303. One hundred and twenty-two of these cases were under my care. During my absence from service the same treatment was carried out in 104 cases by Dr. Francis Kramer and in 48 by Dr. Frank Swing. Twelve are from the private practice of Dr. O. R. Micklethwaite, of Portsmouth, Ohio; ten from the private practice of Dr. Walter Greiss, and eight from the private practice of Dr. Frank Cain, both of Cincinnati.

In 217 cases where the records of the ages were kept, 22 were under 10 years of age, 71 between 10 and 20, 86 between 20 and 30, 29 between 30 and 40, and 9 over 40.

In 156 cases where a record was made of the length of illness before admission, the average duration was nine and one-half days.

The average duration of fever after admission is based on the number of days in the hospital before the temperature remained normal throughout the twenty-four hours. In cases of relapse, the fever has been considered as continuous, even though a number of days of normal temperature preceded the onset of the relapse, up to the time of recovery from the relapse. A considerable number of cases were admitted late in the disease, the temperature reaching normal in a few days. In one case the patient had worked as a shoemaker until the day preceding his admission and with his fever on the decline. He had an enlarged spleen and profuse eruption, gave the history of an attack of typhoid fever, and his blood gave a positive Widal. In 176 cases where the records had been kept, the average duration of fever, after entering the hospital, was a fraction over eighteen days. In 212 cases where the result of Widal tests made was kept, 204 were positive and eight were negative. One of the negative cases had hemorrhages, and all of them had enlarged spleens and the rose spots.

The Widal test was rarely of any value in arriving at a correct diagnosis, as the enlarged spleen and rose spots were nearly always present before a positive Widal could be obtained. In several instances, where the report was positive, it led to mistakes in diagnosis. A positive Widal in a case of fever simulating typhoid, in the absence of rose spots, should suggest the possibility of tuberculosis. The presence or absence of headache, sleeplessness, pharyngitis, dry yellow palms and albuminuria are valuable aids in arriving at a correct conclusion. In searching for rose spots, the back and extremities should be examined. In one case a single rose spot on the thigh established the correct diagnosis after four physicians had practically agreed that the case was one of meningitis. Too much value must not be placed on any one symptom. The most valuable sign of all is the eruption.

In 174 cases in which the fever charts were available for inspection, the highest temperature reached in three cases was 100 F. In six cases it was between 100 and 101; in 21 it was between 101 and 102; in 45 it was between 103 and 104; in 65 it was between 104 and 105; in 28 cases it was between 105 and 106; in two cases it reached 107 (both patients died), and in one case it reached 108, caused by malaria as a complication. This patient recovered. In one case the temperature reached 106 on three different occasions, and fourteen times went to 105.

In 171 cases the pulse rate reached 120, or more, in 32 cases; it was between 100 and 120 in 79 cases, and below 100 in 60 cases.

COMPLICATIONS.

In 303 cases the complications were as follows: Relapses, 31 cases; hemorrhages, 8; perforation of bowel, 2; inflammation of both parotids, 5, and two of these had pneumonia, and one of them a relapse; one case had a diaphragmatic pleurisy; two were confirmed alcoholics and had pneumonia, and one of these a perfora-

tion; furuncles and abscesses, 8; purulent otitis media, 3; carbuncle, 1; rupture of left rectus abdominalis muscle, 1; endocarditis, 1; meningitis, 1; phlebitis, 1; malaria, 1; acute nephritis, 1; ischio rectal abscess, 1.

One of Dr. Francis Kramer's cases[1] illustrates graphically what a typhoid patient may have in the way of complications and still recover. Five days after admission he had a hemorrhage, and during the six days that bleeding continued he had, in all, twenty-nine bloody stools. Three days later the left parotid became inflamed and went on to suppuration. Shortly after that the right parotid inflamed but did not suppurate. Nine days after the involvement of the parotids, facial erysipelas developed. Two weeks later convalescence was established and the patient recovered.

One of the most interesting cases was seen in consultation with Dr. Frank Cain. This patient had profuse hemorrhages from the bowels and vomited a large amount of bright red blood. Later he had a relapse, and after a tedious convalescence extending over several months fully recovered. I believe that this was one of those rare cases in which there was a typhoid ulcer in the stomach.

In 303 cases there were seven deaths, a mortality of 2.3 per cent. Six of these deaths occurred on my service, one under the care of Dr. Francis Kramer. One patient jumped from the fourth floor and was disemboweled on the iron fence in front of the hospital. Death No. 2 occurred in an alcoholic who developed pneumonia and later a perforation. No operation was allowed. No postmortem was made.

Case 3 was admitted Oct. 14, 1906. The most prominent symptom was violent paroxysmal cough. October 17, after a violent fit of coughing, the patient complained of severe pain over the left lower portion of the rectus abdominalis. At the point of pain there was marked bulging during cough, and the spot was soft and tender to the touch and tympanitic on percussion. A diagnosis of a rupture of the rectus muscle was made. October 18 this area became ecchymotic, and by October 23 the ecchymosis had spread down over the pubic region and on the following day had invaded the skin about the umbilicus. October 25 blebs appeared over the right hip, some containing blood, others seropurulent fluid. October 26 blebs appeared over the lower part of the sacrum and the left hip containing blood. October 27 they became purulent and numerous deep abscesses developed in the subcutaneous tissues of the buttocks. Several of these communicated and a large quantity of pus was evacuated by incision and the cavities healed.

The typhoid terminated by crisis on the seventeenth day, the temperature falling from 103.2 F. to normal in two days. After five days of normal temperature the fever rose sharply to 103.2 F. From this time on the fever was irregular, but not high. The pulse was not rapid and fell to 64. The clinical picture was one of a low grade of sepsis. There were no chills, but sweating was a prominent symptom and the face was flushed. Pain in the left hip and thigh gave the patient great discomfort. The appetite was poor, there was diarrhea and profound mental and physical depression. At the point of rupture of the rectus there had been no special change. It was not tender, and the ends of the ruptured muscle could be distinctly felt. The area bulged on coughing and no fluctuation could be detected. Four physicians called in consultation advised against any local surgical interference. The patient died December 22.

On postmortem the space between the ends of the ruptured muscle was found to contain pus, the sheath of the muscle forming the cavity. The history of the case with the postmortem finding hardly renders it necessary to point out the imperative necessity of using the aspirator needle in cases where pus is suspected, even though physical signs are negative.

Case 4 had a hemorrhage on the thirteenth day in the hospital. It was not severe and did not recur. Five days later the temperature suddenly rose from nearly normal to 107 and the patient died. No postmortem was allowed, and the history as I was able to obtain it from the nurse and interne failed to indicate the complication causing death.

The fifth patient to die entered the hospital on the eleventh day of his illness, complaining of severe pain in the region of the spleen, which was enlarged. Rose spots were present. A friction sound was heard with respiratory movements below the heart. The abdomen was tender and tympanitic, but not board-like, and the liver dulness was normal. The possibility of perforation was entertained, but the diagnosis was not made. On the fifth day the temperature rose to 107 and the patient died next day, with a temperature of 101. A postmortem revealed a very large spleen, typhoid ulceration of the intestines and a right-sided diaphragmatic pleurisy. There was no perforation.

The sixth death was due to pneumonia in a confirmed alcoholic. In the seventh, meningitis was the cause of death. The Widal was positive, spleen and mesenteric glands enlarged, and rose spots present, but the bowel was normal.

1. Lancet-Clinic, Cincin., July 6, 1907.

INTRANASAL DRAINAGE OF THE FRONTAL SINUS.

E. FLETCHER INGALS, M.D.
CHICAGO.

The attention of the profession is once more called to my operation for intranasal drainage of the frontal sinus, for the purpose of making its merits more generally known, and of pointing out some modifications in instruments and technic that make it applicable to a larger number of cases, and that guard it from the dangers that have been pointed out by more or less friendly theoretic critics. In the beginning, however, I wish to say that the operation, as described by me in 1904, has proved itself one of the most satisfactory surgical measures that I have ever known. In no case, so far as I know, has the operation itself ever caused any untoward symptoms, although one case of meningitis developed immediately following the too forcible injection of a weak solution of peroxid of hydrogen, eight days after the operation, in a patient with extreme atrophy of all the intranasal bones. In most of these operations a cure of the disease has been effected, apparently with much less inconvenience and discomfort than would have attended other measures employed for the same purpose.

This operation is not applicable in all patients with suppuration of the frontal sinus, for there is now and then one in whom the probe can not be passed through the nasofrontal duct, but I believe this occurs in less than 5 per cent. of all cases. This latter statement will

seem improbable to some who have frequently failed in attempts to pass a probe or canula into the frontal sinus, but I hope to explain the difficulties of this procedure and the means for overcoming them.

Notwithstanding the anatomic irregularities of the nasofrontal duct, and the remote possibility, in exceptional cases, of opening through the posterior wall of the frontal sinus, or laterally into the space just above the cribriform plate of the ethmoid bone (which the French term the fossa ethmoidalis), I still believe that is as safe as any other method of draining the frontal sinus. I believe that, with the modifications here described, it is the safest and best operation for the purpose that has yet been devised, in from 96 to 98 per cent. of all cases of persons suffering from empyema of the frontal sinus; but for the remaining 3 to 5 per cent. some other method should be selected.

In order to make this paper intelligible, it will be necessary to repeat the description of instruments and technic, but as this will reach many who have not seen the former papers, and as some modifications have been made, reiteration seems pardonable.

For fifteen years there was under my care a lady suffering with suppuration of the frontal sinus, who would not submit to an external operation. I gave the subject much thought and finally had made several instruments, which I tried on the cadaver before obtaining a type that met the indications. I finally operated on her with the pilot burr that has since been used on all my other cases, but the gold drainage tube was not employed at first. The enlarged canal nearly closed in six weeks, so that the operation had to be repeated. A gold tube was then inserted, of the same pattern as now used. She wore this tube for over three and one-half years, although she did not need it for the last three years, as the canal would have remained free without it. Some time after suppuration had ceased, this patient took a severe cold which extended to the frontal sinus and as a result there again occurred a purulent discharge which, however, ceased shortly after her recovery from the acute rhinitis.

The instruments employed at this operation were the same that are now used in ordinary cases.

INSTRUMENTS.

The instruments needed for the operation include a pilot with detachable handle, pilot-burr, shield, packer, applicator, and for special cases a pilot-burr and guard of different form, and a gold, self-retaining drainage tube. Syringes and a small silver Eustachian catheter are used for anesthetizing and in the after treatment.

Pilot.—The pilots (or probes) are three or four in number, 14.5 cm. in length, of varying sizes at their distal ends (Fig. 1). They are made of steel (though I sometimes use brass spring wire); the stem of the pilot is 1.2 mm. in diameter, which is the proper size to fit the detachable handle. This portion of the pilot is not malleable. On the distal end of the pilot is a small knob, somewhat larger than the pilot immediately back of it. About 3.5 cm. of the distal portion of the pilot is reduced in size in the different pilots from 0.9 to 0.6 mm. This portion is moderately malleable so that it may be given any desirable curve. The pilot is attached to the detachable handle at an angle of about 45 degrees. It has been found desirable to keep one of the larger of these pilots at a fixed (or normal) curve corresponding to that of the applicator packer and gold tube, but any of the others are bent, as desired, to correspond to the nasofrontal ducts of various subjects. The pilots are usually given the normal curve, about 45 degrees (Fig. 1), varying from that to a curve of about 90 degrees, but sometimes even a greater curve than this may be needed.

Slightly longer or shorter pilots may be used in cases where we wish the burr to pass upward a lesser or greater distance. For this purpose, I generally use a piece of brass spring wire cut to any desired length.

Pilot-burr.—This instrument consists of a burr, with a hole about 2 mm. in diameter through its axis, attached by a hollow wire cable to a steel tube of the same size as the cable (Fig. 2).

The proximal end of this tube is closed and from its center extends the shank for attachment to the dental chuck through which the burr is driven by an electric or other motor, such as is commonly used by rhinologists. (A carpenter's breast drill may be used instead, if a motor is not at hand, but when this is used a special device is desirable for connecting it with the flexible cable to which the chuck is attached; otherwise there is danger of bending the shaft of the cable where the attachment is made.) The burr of this instrument is 6 mm. long and 6 mm. in diameter. It is cut so that it rapidly feeds forward. It is firmly brazed to the wire cable. The wire cable, made of two closely coiled steel wire cables, one within the other, is about 5 mm. in diameter and 6 cm. in length. At its proximal end it is firmly brazed to the steel tube.

The steel tube is the same size as the cable. It is 7 cm. in length, and at its proximal end it is continuous with the shank, 4 cm. in length, by which it is attached to the chuck. At the proximal end of the steel tube is a small lateral hole for cleansing. A modified burr is described below.

Shield.—The spiral tube-shield is of proper size and length to slip over the tube and flexible cable of the pilot burr, to prevent the latter from injuring the Schneiderian membrane when the burr is in operation (Fig. 2). It is made of a thin band of steel. This instrument is also used for holding the drainage tube in position while the applicator is being withdrawn.

Packer.—This is essentially a uterine packer bent to the "normal curve" so that it can be introduced through the enlarged canal to the floor of the frontal sinus (Fig. 3). It is about 5.5 mm. in external diameter, and 20 cm. in length.

Applicator.—This is made from aluminum wire 3.8 mm. in diameter. Its distal end is bent to the normal curve and its handle is just at the right distance from this end to allow the spiral shield, when passed over the applicator, to slip down the proper distance, to act as a check for the drainage tube, when it is placed over the end of the applicator for introduction.

Modified Burr.—Owing to the possible danger of cutting through the tabula interna while enlarging the nasofrontal duct with the pilot-burr, I have had made a modified burr and a guard by which the operation may be done with absolute safety so far as this factor is concerned (Fig. 4). This burr is only 5.5 mm. in diameter, and its blades are so made that it will not feed forward as fast as the regular burr; furthermore, it would not cut the dura if it, by any chance, came in contact with it. This form was necessary to prevent the burr from catching the guard when in use; otherwise this is the same as the original burr.

Guard.—The guard for this burr is made of steel, with an unyielding handle, properly curved, to facilitate

introduction. This burr does not work so smoothly as the original type, therefore it is not used, except when we fear that the axis of the nasofrontal duct is abnormally close (i. e., less than 3 mm.) to the dura mater; but in such cases it works satisfactorily and absolutely prevents cutting too far backward. Similar guards may be used to prevent cutting laterally into the fossa ethmoidalis.

Through the courtesy of Drs. Geo. E. Shambaugh and J. Gordon Wilson, of the University of Chicago, I have examined several preparations, which, added to my own specimens, make 50 subjects that I have studied with reference to the danger of perforating the tabula interna, or of cutting laterally into the fossa ethmoidalis. There were two cases in which there would have been a possible danger of injuring the internal table by my operation, though in neither was the danger very marked, and in both I believe it would have been entirely obviated by drawing the burr forward, as shown in Figure 6. In one of these same cases there would also have been the possible danger of cutting into the fossa ethmoidalis, which illustrates the necessity for carefully taken radiographs. In another specimen the fossa ethmoidalis and the cribriform plate were depressed nearly a centimeter below the usual location, in such a position that one would almost certainly open into the brain cavity in making an opening from the frontal sinus into the nose during the external operation, or by Halle's operation; but in this particular case there would have been no danger from my operation.

In two of the fifty cases there were no sinuses on either side. In two, the sinus was absent on one side, and in three others it was very small on one side with a fair-sized sinus on the other side. In several, there were peculiar arrangements of the fronto-ethmoidal cells in relation to the sinus. In one there was a partial sinus on one side which had no wall to separate it from a very large sinus on the other side, and in one, there were enormous communicating sinuses on both sides, obliteration of which, had it been possible, would have caused a hideous deformity of the whole frontal region.

Another method of preventing the burr from cutting too far backward is to fasten a ligature, by a clove hitch, to the distal end of the spiral-tube-shield, and prevent it from slipping by applying around it a narrow strip of rubber adhesive plaster (Fig. 6). When the burr, with this shield over it, is passed in over the pilot, so that it presses against the lower opening of the nasofrontal duct, traction is made on the ligature, which draws the pilot forward. The traction is maintained while the burr is cutting its way along the canal, and as a result, the burr cuts as far forward as possible.

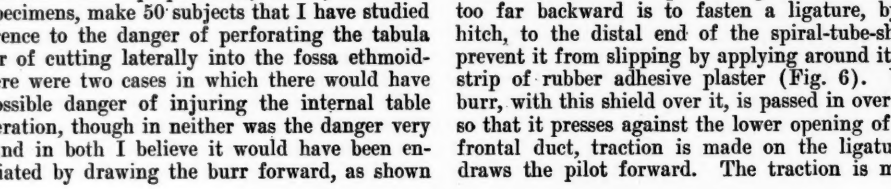

Fig. 1.—Pilots and handle. (Full size.) A, normal curve; B, curve of 90 degrees; C, curve of about 85 degrees.

Fig. 2.—Pilot-burr and flexible tube shield. Three-fifths actual size.

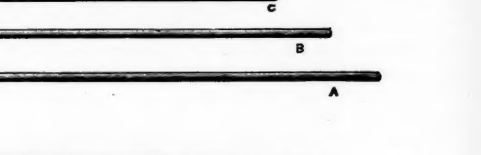

Fig. 3.—Packer. One-third actual size.

Figure 4.

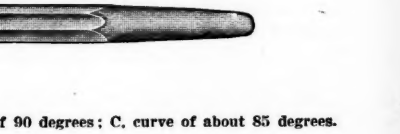

Figure 5.

Fig. 4.—Modified pilot-burr (three-fifths actual size) with the guard on it ready for introduction into naris. The guard is in position for the cutting to begin. In operating the handle of the guard is gradually brought down to the lower angle of the nostril and the distal end is at the same time pushed upward and forward until the burr cuts its way into the frontal sinus. Care should be taken that the feeding in of the burr is left wholly to the pressure made by this guard.

Fig. 5.—Gold drainage tube (actual size). The lower cut shows the tube with the gelatin capsule over the end. The upper cut shows the tube with size and shape of cup-shaped end at right. Size of tube at left, and gelatin capsule to the left of this.

Drainage Tube.—This is made of spring gold, with a cup-shaped lower extremity and flaring springs at the upper end made by sawing down the sides of the tube so as to make six equal sections. The tube has the curve shown (Fig. 5), which is the same as that of the end of the applicator and packer. It is 2.6 to 3 cm. long, and 6 mm. in its external diameter, and about 5.5 mm. internal diameter. The cup-shaped lower end of the tube is 6.5 mm. wide and 1 cm. long. The upper end of the tube is cut down 1.7 cm. in six places so as to leave sec-

tions about 3 mm. wide, the distal ends of which are turned in so as to make a blunt end that will not irritate the frontal sinus. It is essential that this tube be made of spring gold so that it will be self-retaining, and it is desirable to have the walls of the tube as thin as possible.

Syringe for Anesthetizing.—A hypodermic or other small syringe, with a slender silver nozzle, from 1.5 mm. to 2 mm. in diameter and 10 cm. in length, is needed for anesthetizing the parts. The stem of the plunger of this syringe should be threaded and fitted with a small, milled wheel that will enable the operator easily to regulate the quantity of the anesthetic solution (¼ to ½ minim) that is injected each time. A wire is passed through the silver nozzle, and it is curved before the anesthetic is applied to the same form as the pilot.

For the after treatment of the case a medium sized silver Eustachian catheter, and a two-ounce rubber bulb, with about eighteen inches of rubber tube attached, are desirable for cleansing; also a small rubber bulb, with a capacity of not more than one or two drams for medication. These should both be supplied with hard rubber connections that fit the end of the Eustachian catheter. The Eustachian catheter should be given the "normal curve," the same as the pilot, in order that it may readily be passed into the drainage tube, which in all cases has the same curve. The catheter is marked by wrapping a narrow strip of adhesive plaster about it so the patient may know the proper distance it should be passed into the nostril in order to reach the end of the gold tube. When this is done the patients have very little difficulty in finding the cup-shaped end of the tube and passing the catheter into it. The tube being of metal renders it easy for the patient, by the sense of touch, to know when the catheter is in the right position.

DIAGNOSIS.

The diagnosis is made from the purulent discharge usually from one side, supraorbital pain commonly mistaken for neuralgia, which often occurs in the middle of the forenoon and disappears after two or three hours, tenderness of the supraorbital plate, a marked shadow on transillumination or use of the *x*-ray and aspiration of pus from the frontal sinus, or blowing it out by insufflation of air through a canula that has been introduced through the nasofrontal duct.

In introducing the canula or probe, if the anterior end of the middle turbinated body has not been removed, the parts should be anesthetized thoroughly, and then with Killian's long-bladed speculum, the middle meatus should be opened, the turbinal being pressed against the septum. The probe or canula should usually have a curve of about 55 or 60 degrees, and in some cases even 90 to 100 degrees will be found better.

With a good light the end of the probe is introduced through the hiatus semilunaris into the infundibulum, just back of the processus uncinatus and in front of the bulla ethmoidalis. From this point the probe passes upward and forward, as stated above, and is likely, at the same time, to pass outward at an angle of about 30 degrees to the perpendicular plane of the septum, into a blind pouch at the upper end of the infundibulum, or into an ethmoidal cell. It should then be withdrawn about 5 to 8 mm. and turned a little more inward, where we hope to find the orifice of the nasofrontal duct. When it slips into this duct, it usually passes upward and outward at an angle of about 20 degrees, to the septum. When the probe enters the duct, its stem is carried downward and inward to the lower inner angle of the nostril, and the distal end is very gently pressed upward and forward into the frontal sinus, where it should be felt by the patient near the inner end of the eyebrow. With the probes that I use, the distal end, when in the frontal sinus, is usually from 8 to 10 cm. (3⅛ to 4 inches) within the inferior inner angle of the nostril. If it is a centimeter less than this, I suspect that the probe has passed into an ethmoid cell or into the cul-de-sac of the infundibulum. The passage of the probe is greatly facilitated when there is much swelling, especially in acute cases, by anesthetizing the nasofrontal duct, as far as we can reach it, with a small canula, by injecting, four or five times, about one-third of a minim of a 20 per cent. solution of cocain in a 1 to 1000 solution of suprarenalin, which reduces the swelling and thus enlarges the canal. In some cases, I have been obliged, even after reduction of the swelling, to use the smallest of my probes, which is only 0.6 mm. in diameter.

As a factor of safety, before operating, we should determine the relation of the nasofrontal duct to the tabula interna and the cribriform plate of the ethmoid, by passing a probe into the sinus and viewing it there with the fluoroscope, and also by taking *x*-ray negatives from squarely in front, and laterally parallel to the plane of the forehead.

I have found the fluoroscope especially useful for this purpose in the lateral position, for by slightly turning the head slowly back and forth, and by moving the probe while inspecting the shadows, I have, in some cases, been able to get a much better idea of the relations than by the *x*-ray negative, which is sometimes very misleading as shown in Figure 8, where the canal was normal and yet the shadow of the probe made it appear about a centimeter back of the tabula interna in the brain.

In making the negatives it will not do to trust the placing of the patient even to a skilful operator, unless he has had experience in this particular kind of work.

We have obtained the best results in the front view by having the patient's forehead and nose rest on the plate; and in the lateral view by placing the affected side on the plate, truing the forehead with a right angle, one limb of which rests on the plate and the other against the forehead, making sure that the plane of the frontal bone is perpendicular to the plate, and at the same time that the rays from the *x*-ray tube are also perpendicular to the plate. By using both the photographic negative and the fluoroscope when the probe is in position, we may be very confident of the location of the nasofrontal duct.

OPERATION.

I have operated on most of my patients at my office, and have allowed them to go to their homes, sometimes in distant states, within a day or two. This course has been attended by no bad results; but it would doubtless be better to operate at a hospital, so that the patient could be kept quietly in bed for a day or two afterward. The anterior end of the middle turbinated body should be removed and the naris cleared of polypi or other obstructions before the operation on the sinus is attempted. This may be done immediately before the operation on the sinus or several weeks previously. The latter plan is best, when time permits, because it allows time for healing of this part of the wound, and in some instances it permits healing of the frontal sinus without operating to enlarge the nasofrontal duct.

Cocain is used as the anesthetic, in most cases, but when the patient is very nervous, or if for any other reason it appears desirable, chlorid of ethyl is administered when everything is ready after the probe has been introduced, and its effects remain long enough to complete the operation. I now use for the local anesthetic 20 per cent. of cocain hydrochlorate in a solution of 1 to 1000 of suprarenalin, applying it to the frontal sinus through the long silver nozzle of a syringe. About one-third of a minim is applied every ninety seconds, five or six times. The solution finds its way down beside the canula, and thus the whole tract becomes anesthetized and exsanguinated. A weaker solution is generally used sparingly in the naris before the manipulations are begun.

Not infrequently difficulty will be experienced in passing the probe or canula through the nasofrontal duct, but, judging from Dr. Coakley's statements, and from my own experience, this can be accomplished in nearly all cases by gentle manipulation and patience, coupled with the use of cocain and suprarenalin.

I have done this operation on two or three patients with perfect success, where I was unable to pass the probe into the frontal sinus before the operation was begun. In these cases the probe passed into a fronto-ethmoidal cell or the cul-de-sac of the infundibulum, and I was unable to get it into the nasofrontal duct, but I ran the burr in about a centimeter over the pilot, thus enlarging the opening and cutting away the sides of the infundibulum and adjoining cells, and then I had no difficulty in entering the nasofrontal duct.

In twenty-eight successive patients with suppuration of the frontal sinus I have found no case of chronic empyema in which I could not pass the probe, although I failed in two acute cases, but I believe I would have succeeded in these cases if I had removed the anterior end of the middle turbinated body; and in one of these cases I think I could have succeeded without this if I had given it more time.

In one cadaver operated on I found a frontal sinus about 8 to 10 mm. in its vertical and lateral diameters and only about 2 to 3 mm. in its anteroposterior diameter. The probe went in such a short distance that I thought it was not in the frontal sinus, but when I opened the sinus from without I found that it was. On the opposite side, in the same subject, the frontal sinus was about twice as large as this one, with a large fronto-ethmoid cell extending up behind it, into which the probe passed. The opening into the frontal sinus was at right angles to the axis of this cell through the wall of bone between it and the frontal sinus, in such a position that it was a physical impossibility to pass any probe into it from the nasal cavity; but even in this case, I believe, the frontal sinus would have been opened if I had employed the same method adopted in the difficult cases just referred to.

Before beginning the operation all instruments are sterilized, the spiral tube shield is slipped over the burr, and the burr attached to the chuck of a dental engine. The spring ends of the drainage tube are bent back so as to make its open end about a centimeter in diameter, and then they are gently pressed together and enclosed in a No. 2 gelatin capsule. This is then dipped into melted paraffin, melting at about 110 degrees, whereby it is covered by a thin film that will prevent it from dissolving in the fluids in the nose for about five minutes after its introduction. Unless covered in this way, the capsule would soften in about twenty seconds, which would not be quite time enough for the introduction of the tube.

As soon as the patient is properly anesthetized, and the pilot probe introduced, the handle is removed from the pilot (or probe), the hollow burr is slipped on over it and carried up to the lower orifice of the nasofrontal duct, the shield being pushed up with it so that the mucous membrane of the naris will not be injured by the rapid revolutions of the flexible cable.

The electric current is now turned on, and the burr is gently pressed upward. It usually cuts its way into the frontal sinus in two or three seconds. I usually draw it back and press it up again two or three times to make sure that the canal is perfectly free, then withdraw it and the pilot.

The patient must now be cautioned not to blow the nose for three or four days because of the danger of causing emphysema about the eyelids, as in other cases where the ethmoid cells have been opened.

If it has been necessary to use a pilot with more than the normal curve, one with the normal curve is now introduced, and the burr is passed in again to insure a proper curve of the canal to fit the gold drainage tube. The naris should next be mopped thoroughly with vaselin on a swab of cotton. The packer is then introduced well into the enlarged canal, and through it the frontal sinus is packed with a strip of one-inch sterile gauze saturated with a 20 per cent. solution of chlorid of zinc. This is allowed to remain about five minutes. The packer is then drawn out about a centimeter so as to bring its end as nearly as possible to the lower end of the enlarged canal, and the gauze is then withdrawn, through it, thus cauterizing the whole length of the wound but avoiding any cauterization of the mucous lining of the naris.

The spiral tube shield is next passed over the stem of the applicator, and then the gold drainage tube is slipped on the end of the instrument and introduced into the enlarged drainage canal (Fig. 9). The spiral tube shield is pushed up against the lower end of the gold tube to hold it in position, the applicator is withdrawn and the operation is finished.

If the drainage tube does not pass in easily it must result either from the burr not having been carried into the frontal sinus or else from the pilot having had a curve different from the normal. In either case the tube should be withdrawn and the burr passed in again over a pilot of normal curve. I have sometimes packed the naris afterward with gauze to prevent possible bleeding, but I do not think this necessary, and it is objectionable if not needed. I have in no case seen bleeding of more than an ounce of blood during or following the operation, and usually there are not more than two or three drams.

The patient is directed to keep the nostril on the operated side closed with a pledget of cotton for three or four days. In some cases I have blown orthoform through the tube into the frontal sinus, but in one case the tube through which it was blown fitted so accurately into the lower end of the drainage canal that the insufflation caused emphysema of the eyelids with the naturally resulting pain and subsequent black and blue discoloration; therefore, I now caution against insufflation of anything into the frontal sinus after the operation.

The mucous membrane is likely to swell more or less for several days, and therefore I give the patient about 100 grains of powder, to be gently insufflated into the

nostril, in one or two-grain doses, three or four times a day, for the purpose of reducing the swelling and permitting more thorough cleansing of the naris and frontal sinus. This powder contains 3 per cent. of cocain, 1.5 per cent. of biborate and the same amount of bicarbonate of soda, 25 per cent. of iodol or of thymolis iodidum (aristol) and sugar of milk, q. s. This amount of powder is sufficient. Because of the contained cocain I supply it to the patient to avoid the possibility of its repetition.

As a wash for the frontal sinus, to be used once a day, I order either a strong solution of boric acid or the following: Thymol, 4 grains; sodium bicarbonate, sodium biborate, sodium salicylate, sodium chlorid, 2 drams of each. Use an even teaspoonful in a glass of warm water. I do not consider this important, except to insure that the gold tube does not become clogged with dried mucus. I think that it is desirable to wash the cavity less frequently as the case progresses toward recovery. Unless suppuration ceases very soon I have the patient apply, after the wash, about half a dram of a 10 to 20 per cent. solution of argyrol. This is done through the Eustachian catheter by means of the small rubber bulb. The patient at the time should lie on the back, with the head hanging off the side of the couch so that the solution will remain in the sinus for five minutes.

After two or three days following the operation it will not ordinarily be necessary to see the patient at all until the time arrives for the removal of the gold tube. I place this time at about four months, although there is no objection to allowing the tube to remain much longer if it keeps its place. In two or three of my cases the tube has gradually worked down about a centimeter in five or six months, apparently from repeated slight displacements by sneezing. To remove the tube a little cocain may be injected through it and allowed to run down beside it, or chlorid of ethyl may be given; then the end is seized with forceps, and it is withdrawn easily.

Some have thought that the drainage canal established by this operation is not large enough for thorough drainage of the frontal sinus; on the contrary, experience shows that it is ample. Some think that a suppurating frontal sinus must be curetted in order to get healing. Experience shows that this is not usually the case. Some have urged that this operation permits reinfection and that it would be better to obliterate the sinus to prevent this. Except in extremely rare cases, I do not think it wise or desirable to obliterate the frontal sinus, and the history of my cases shows that reinfection rarely occurs, and that when it does the suppuration soon ceases. Given free drainage, the frontal sinus will heal even more promptly than the maxillary sinus after empyema. Reinfection will undoubtedly occur in some cases if the patient takes a "severe cold," but as the drainage remains free it will disappear soon after the inflammation of the nasal mucous membrane heals. Usually the pain over the eye ceases shortly after the operation, but if the patient should afterward at times have supraorbital neuralgia, this must not be taken as a sign that the sinus has not healed.

I once cured a long standing empyema of the frontal sinus by treating it for about six weeks through the natural duct with solutions of protargol. There was never suppuration or even mucous discharges from it afterward during the seven years that the patient lived, yet all of this time he was subject to more or less supraorbital neuralgia. I think that in any instance we are justified in pronouncing the patient cured when all purulent and mucous discharge ceases.

REPORT OF CASES.

CASE 1.—D. T., aged 50; suppuration of the frontal sinus and antrum for fifteen or sixteen years. The gold drainage tube was not inserted at the first operation. About six weeks later the drainage canal had so far closed with bony deposit that I could only introduce a small probe. I then ran the burr in again and put in the drainage tube. For a time the cavity was washed daily and a 4 per cent. protargol solution was used afterward. She progressed slowly until there was complete cessation of the secretion of pus. Forty-two months afterward the tube was removed. The sinus was in a perfectly healthy condition.

CASE 2.—C. M. J., aged 30, suppuration of frontal sinus for eight weeks, associated with some disease of the nose which the physician in charge stated had caused a large amount of granulation tissue that he had removed from time to time. I operated Sept. 27, 1904, and obtained thorough drainage, but when I saw the patient three or four days later, I discovered that the nasal trouble was malignant. The patient died from extension of the carcinoma about four weeks afterward.

CASE 3.—D. C. J., aged 32; suppuration of frontal sinus and one antrum of ten years' duration. Operated Oct. 1, 1907, and obtained perfect drainage. The patient returned to his home in a distant state the same day. A month later his physician reported that there was no more discharge from the sinus and that he had no inconvenience whatever from the tube.

CASE 4.—W. A. E., aged 42; suppuration of the frontal sinus for over ten years; non-suppurative inflammation of the antrum; nasal mucous polypi. Operated Oct. 16, 1906, removing polypi in the forenoon, and in the afternoon operated on frontal sinus. Patient returned the next day to his home. At the end of eight months the tube had worked down about 1.5 cm. and I removed it. There was still a very little discharge, but this would increase in cold or stormy weather.

CASE 5.—Z. W. L., aged 35; suppuration of frontal sinus of twelve years' duration. Operated on March 12, 1907. Four months later tube had worked down about a centimeter, and I removed it. The canal was lined with smooth mucous membrane. There was little or no discharge from the sinus.

CASE 6.—H. C., aged 24, suppuration of frontal and sphenoid sinus and antrum of over a year's duration. Operated May 4, 1906; removed the tube in four months. The canal was lined with a smooth mucous membrane, and there was no discharge from the sinus. Later the patient reported that on taking cold there was some mucous discharge from the sinus which would last a few days only.

CASE 7.—S. X., operated on May, 1906, for suppuration of frontal sinus of long standing. There was extensive specific destruction of bony structures of nose. Operation established perfect drainage, but have not heard from patient since.

CASE 8.—L. N., aged 25; suppuration of frontal sinus and antrum with profuse discharge of pus from the nose. Operated March 4, 1904; established free drainage from the frontal sinus, but the suppuration continued. About eight months after the operation there was still profuse discharge, although the drainage canal from the frontal sinus was full size. A radical operation could not be done at that time, and later another surgeon did an external operation; but four months later there continued to be discharge near the inner end of the eyebrow, and profuse discharge from the nares. She was under the care of another surgeon for several weeks, with little or no improvement, but then disappeared. This is the only patient I have seen who was under observation for more than six weeks in whom there was not a practical cure of the disease. In this one, I believe that a Killian operation ought to be performed.

CASE 9.—M. E. A., aged 43; suppuration of frontal sinus and antrum of Highmore for three years. A small opening had been made through the inferior meatus into the antrum some months before I saw the patient. Operated Jan. 7, 1907; the patient went to his home in a distant state the following day. About seven weeks later he could not wash out the frontal sinus and was brought back to me. The tube was occluded with dry mucus, which was removed. Five months after the operation the discharge had ceased, the tube had gradually worked down by this time and was taken out.

CASE 10.—G. H., aged 22; suppuration of frontal sinus for three years. Operated on Feb. 25, 1907. She wore the tube for seven months, and there was a little mucus discharge from the sinus, but no pus. The drainage canal was smooth and of full size so that there was perfect drainage from the frontal sinus.

CASE 11.—U. C., aged 33; suppuration of both frontal sinuses for about three years, with probable suppuration of both antra of Highmore and extensive atrophy of all intranasal bones, except the septum; operated Feb. 21, 1907. Obtained thorough drainage, and the operation was satisfactory in every respect. As there was very free drainage, the sinus was washed out gently with a weak solution of peroxid of hydrogen, in a nearly saturated solution of boracic acid, every day for over a week; then, as there was still a good deal of purulent discharge from the sinus, it was thought that all parts of the cavity were not being reached by the wash; consequently the solution was thrown in with extra force. The patient immediately complained of severe pain in the outer part of the sinus and in the temple, and this was immediately followed by large quantities of thick foam which welled out of the tube. The cavity was immediately washed with sterile water, but the pain continued, and meningitis developed, which terminated unfavorably in forty-eight hours. In this case it is probable that the atrophy of bony tissue had extended to the walls of the sinus, and that there was a deep narrow recess far back under

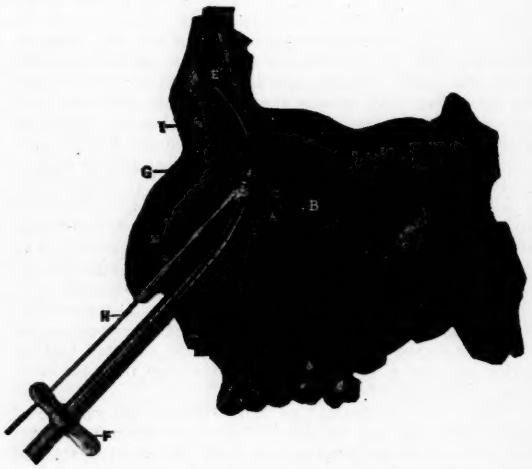

Fig. 6.—Pilot-burr in position for operation, with ligature attached to distal end of shield for drawing the burr forward while it passes up the probe into the frontal sinus. The middle turbinated body has been removed. A. Processus uncinatus. B. Bulla ethmoidalis. C. Infundibulum. D. Sphenoidal sinus. E. Frontal sinus. F. Spiral-tube-shield covering pilot-burr as in operation. G. Burr ready to begin drilling. H. Ligature fastened to distal end of shield for pulling burr and pilot forward. I. Pilot.

the orbital plate filled with desiccated pus. The same wash that was used in this case had been used in several previous cases, but we have not employed it since.

CASE 12.—M. F., aged 32; suppuration of frontal sinus, of fifteen years' duration; empyema of one antrum. Operated Feb. 21, 1907, without difficulty; no bleeding, perfect drainage. The day following the operation on the sinus I made a large opening through the inferior meatus into the maxillary sinus. October 15 there was still some discharge from the nose, and he could not wash out the frontal sinus very well. It is probable that the frontal sinus has practically healed, but that the antrum is still discharging.

CASE 13.—H. J. D., aged 25; suppuration of frontal sinus for several years, also empyema of maxillary sinus on same side. Operated on frontal sinus Oct. 4, 1906, and made a large opening into the antrum through the inferior meatus at the same sitting. The operation was thoroughly successful. The tube came out in five months, but the drainage remains perfectly free. The antrum has healed and there is very little discharge from the frontal sinus, although something comes occasionally and he washes it out about once a week with peroxid of hydrogen and a solution of boric acid.

CASE 14.—E. L., aged 51; suppuration of frontal sinus of nineteen months' duration; also empyema of antrum of Highmore. Operated on frontal sinus June 15, 1905, and later made a large opening through the inferior meatus into the antrum. At the end of six months, when I removed the tube, there was very slight discharge from the cavity. Two months later the nares was in a perfectly healthy condition.

CASE 15.—C. A. D., aged 45; suppuration of frontal sinus of two years' duration. Operated July 25, 1907. Ten weeks later there was still a slight, opalescent mucus discharge from the sinus, but he was slowly and steadily progressing to a cure.

CASE 16.—M. W. R., aged 30; suppuration of frontal sinus of ten days' duration. Operated on August 12, 1907. Two months' later patient reported that the sinus was perfectly well.

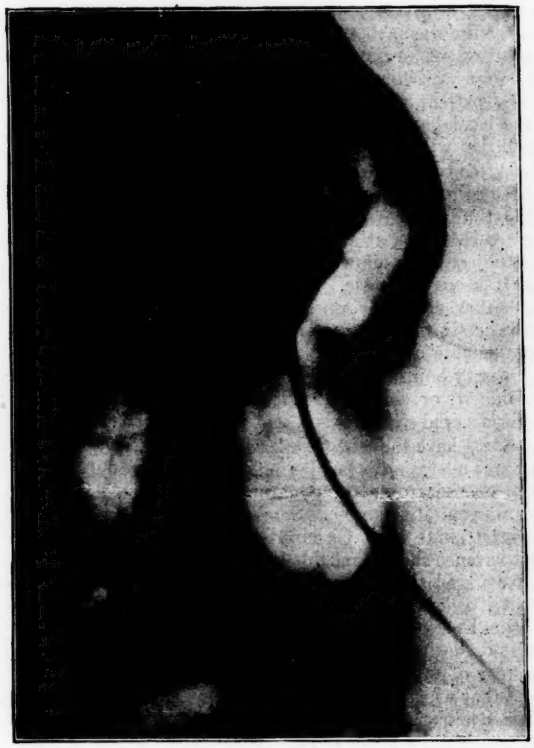

Fig. 7.—Radiograph showing probe in frontal sinus, lateral view.

CASE 17.—M. T., aged 41; this patient had an external operation on the sinus. The external wound had healed but had broken out again. Suppuration continued and drainage from the nose was very imperfect. I operated April 3, 1905. There was a complete cure in a few weeks. I removed the tube at the end of seven months. There had been no discharge for several months.

CASE 18.—B. H. G., aged 25; suppuration of frontal sinus of two years' duration, although there had been eight or nine remissions in the severity of the symptoms during that time. Operated May 27, 1907. The operation was satisfactory in every respect. October 21 I removed the tube. He had seen almost no discharge on washing out the cavity since the first two weeks following the operation, and had been practically well ever since.

CASE 19.—M. P. R., aged 42; suppuration of frontal sinus for fifteen or sixteen years; also suppuration of antrum of

Highmore for at least nine years. Operated April 6, 1904, and allowed him to go home the next day. The tube was removed eight months after the operation. Eleven months after the operation the drainage canal was free, with no pus from the frontal sinus, but still some from the antrum.

CASE 20.—C. S. C., aged 37; suppuration of frontal sinus of about two years' duration; also a great deal of gastric disturbance and frequent vomiting for a year and a half, apparently due to swallowing the pus. Operated on March 22, 1906. The gastric symptoms were completely relieved two or three days after the operation. Suppuration from the frontal sinus had entirely ceased about four months after the operation. The tube was removed about nine months after the operation. Thirteen months after the operation the nares were in perfect condition. In this, as in one other case, Nature had provided a valve-like membrane which partially closed the opening during inspiration or blowing of the nose, but which did not interfere with its full size for drainage.

CASE 21.—P. T. E., aged 29; suppuration of frontal sinus of several months' duration. An external operation had been made six months before, but suppuration continued. Operated June 19, 1907, and at the same time opened the sinus again externally. Obtained perfect drainage, which had not been present before. A few days later there was sharp inflammation above the orbit which also involved the opposite side. The symptoms were so severe and obstinate that in spite of his denial we suspected syphilis, which he finally confessed. We placed him on potassium iodid and he improved rapidly. Seven months after the operation, there was very little, if any, discharge from the frontal sinus, and the other symptoms had disappeared.*

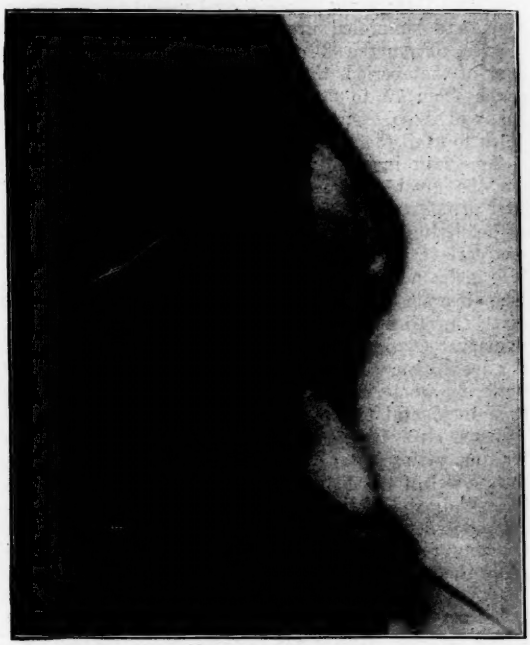

Fig. 8.—Radiograph showing probe in frontal sinus, but having the appearance of being far behind it in the brain. It was demonstrated by the fluoroscope that the probe was in the frontal sinus. After the operation another radiograph was taken showing the tube in position. It also appeared back of the frontal sinus, though it was known to be placed correctly. This illustrates the importance of having the head in the right position when the radiographs are taken, and shows how easily one may be misled by the shadows.

CONCLUSIONS.

The series of cases that I have presented contains a few that were not heard from afterward or that for other reasons could not be used in estimating the ultimate value of the operation, but in every case the operation itself was done without any unfavorable result, and in every instance it established free drainage. Analyzing all the cases that could fairly be considered, I believe that the following conclusions are justifiable:

This operation leaves no scar, whereas the scar from the external operation often causes a very serious deformity and one which can not be remedied safely by injections of paraffin, because this procedure sometimes causes sloughing; it has been followed by malignant keloid-like growths in several instances, and by death in some cases.

This operation usually incapacitates the patient for only one or two days.

This operation is generally done under local anesthesia, a general anesthetic being used only in rare cases, and then chlorid or ethyl or some other agent that will cause anesthesia for only two or three minutes is sufficient.

This operation can be done in from 95 to 98 per cent. of all chronic cases, and in the majority of acute cases, provided the anterior end of the middle turbinated body has first been removed.

Fig. 9.—Radiograph showing drainage tube in position: lateral view.

The middle turbinated body should be removed in practically all cases of frontal sinuitis, whether suppurating or not, in order to insure free drainage, which of itself is often sufficient to cause a cure.

As a factor of safety, the fluoroscope and *x*-ray negatives should generally be used, with the probe in position in the frontal sinus in order to assure the surgeon of the relation of the nasofrontal duct to the surrounding parts.

In many cases suppuration of the antrum of Highmore is associated with empyema of the frontal sinus, and in all such free drainage must be established from the antrum, preferably through the inferior meatus into the naris.

Suppuration of the ethmoid cells is frequently associated with frontal sinuitis, but this operation will open the adjoining cells sufficiently in the majority of cases. Suppurating cells not opened by it should be given free drainage by the usual methods.

Experience has shown that the drainage established by this method is ample.

* I have operated on one more patient since this paper was written, with the most satisfactory results.

Frequent washing out of the frontal sinus after the operation is not desirable in most cases, although for a time it should be washed at least once daily to prevent the tube from becoming closed by desiccated secretions.

Washing out of the frontal sinus with peroxid of hydrogen, even in weak solutions, is unsafe, even where there is very free drainage.

One of the most efficient remedies for checking the suppuration is a 10 to 20 per cent. solution of argyrol.

Reinfection may occur with attacks of severe cold in the head, but the suppuration soon ceases because the free drainage is permanent.

I believe this operation is as safe as any other that has thus far been described for the treatment of suppuration of the frontal sinus. It is very doubtful whether the burr used in this operation could cut the dura in any case, no matter how it was applied against it. Exposure of the dura in the frontal sinus would seem no more dangerous than that occurring in operations for suppuration of the mastoid, in a large percentage of which this exposure occurs.

This operation will surely establish free drainage, even in cases of empyema in which it may not be sufficient to effect a cure. In cases that do not greatly improve within a few weeks the frontal sinus should be opened externally and cleaned out. The enlarged drainage canal resulting from the intranasal opening of the sinus would allow free drainage into the nose and would lessen the danger from the external operation.

Healing is apparently as rapid after this as after any other operation on the frontal sinus. Probably 95 per cent. of all suitable cases will practically recover within from two weeks to six months.

I believe that an operation for intranasal drainage should be first chosen in practically all cases of empyema of the frontal sinus, and I believe that the operation I have described for this purpose is the easiest, both for the patient and the surgeon, and the safest of any of the operations thus far described.

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PRACTICAL CYSTOSCOPY: ITS SCOPE AND LIMITATIONS.

WITH A REVIEW OF THE PROMINENT CYSTOSCOPES OF THE PRESENT DAY.*

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The cystoscope has been so thoroughly identified with the progress made in genitourinary surgery during the past decade that it is not without good reason that the chief measure of that progress has been ascribed to this instrument.

Without going into the history of the subject, it may be said that practical, useful, modern cystoscopy had its beginning in the period of 1875-78, when Nitze presented his early models of cystoscopes. While the stamp of this parent stock is still evident in the instruments of the present day, there has been gratifying evolution from the heavy, complicated and cumbersome instruments of large caliber, hot lamps and unreliable cooling apparatus of that time, to the light and graceful ones, of wonderful precision and wide application, of to-day; instruments provided with brilliant lamps that do not burn, and with means for maintaining a clear field for observation and work.

Ureteral catheterization, in connection with cystoscopy, may be divided into two periods of development, namely, previous to about 1900, and since that time. While in the ten or fifteen years previous to 1900, catheterizing cystoscopes had been submitted by Brenner (Fig. 1), Casper (Fig. 2), Albarran, and Nitze (Fig. 3), it can not be said that their use was attended with the success afforded by simple cystoscopy up to that time. In the hands of experts, attempts at catheterization gave only a modicum of success, something like 30 to 50 per cent., leaving failure stamped on too large a proportion of cases to admit this to the standing of a reliable procedure. The apparatus and methods of Pawlik and of Kelly were applicable only to females, and though admirable, were restricted in their sphere of usefulness.

During the year or two previous to 1900, the production, in this country, of the low-tension, cold electric lamp, led to a revolution in cystoscopes that has rendered them more practical and useful to the profession, and simplified ureteral catheterization to a like degree. From the 30 or 50 per cent. of successes, the best of that period, the more modern instruments have given from 75 to 90 per cent. of successes, enabling many of those, even, who do not make a specialty of this work to avail themselves of its great advantages.

American ingenuity deserves a full meed of credit for the great progress thus recorded. Tilden Brown first demonstrated the feasibility of the double-barreled catheterizing instrument (Fig. 4), permitting synchronous catheterization of both ureters at the one sitting.[1] His instrument utilized water as a distending medium. The air-cystoscope (Fig. 5) which I introduced in 1900 at the meeting of the American Association of Genitourinary Surgeons,[2] although not adding much to bladder inspection, contributed largely to the reliability of ureteral catheterization by eliminating the impediments then incidental to water distension and imperfect lens systems, etc. Bierhoff's modification of Nitze's catheterizing cystoscope (Fig. 6) represents, probably, the best model of the Nitze type of cystoscope. It permits the withdrawal of the cystoscope from the bladder after double catheterization, without twisting the catheters in the way required by the European instruments, that adopt the indirect mode of catheterization.

CHARACTERISTICS OF CYSTOSCOPES.

The several European cystoscopes, excepting the Brenner, have accomplished the following objects: (a) A good right-angle view; and (b), catheterization of the ureters by the indirect method. They are the particular objects fulfilled by Albarran's, Casper's, and Nitze's newer catheterizing cystoscopes. Another form of the Nitze cystoscope, non-catheterizing, furnishes a good retrospective view for observing the prostate and vesical neck.

An interesting and ingenious cystoscope devised by Schlagintweit (Fig. 7) furnishes a retrospective view by means of a movable lens, which when drawn within the shaft (Fig. 7A), gives a right-angle view, but when pushed out on the side of the shaft (Fig. 7B), gives the full retrospective view. While admitting the completeness of the retrospective view thus obtained, and the ingenuity of the mechanism employed, the pos-

* Read by invitation before the Buffalo (N. Y.) Academy of Medicine, Jan. 7, 1908.

1. Jour. Cutan. and Genitourinary Dis., 1900, p. 418.
2. Id., 1900, p. 420.

sibility of disarrangement of the mechanism and "hanging" of the lens in its eccentric position, causing difficulty of extraction, etc., must occur to the conservative operator.

In 1904, with this objection in mind, I obtained a very satisfactory retrospective view in a retrograde cystoscope. This was obtained by facing a hemispherical globular lens backward, so as to gather in the rays of light coming from the direction of the operator himself; in other words, the vesical neck and prostate, after the introduction of the cystoscope into the bladder. This is the same principle, applied in the Otis examining cystoscope (which is non-catheterizing, and presents only the right-angle and retrospective views), and it has also been incorporated into my later, universal cystoscope.

The European catheterizing cystoscopes, with the exception of the Brenner, have usually employed the indirect method of approaching the ureteral openings (Albarran, Nitze, Casper); whereas, most of the American instruments (both air and water medium) have employed the direct method, after the Brenner type.

RELATIVE ADVANTAGES OF DIRECT AND INDIRECT CATHETERIZATION.

For cystoscopy, only, the right-angle lens probably shows a greater proportion of the interior of the bladder

Fig. 1.—Brenner's catheterizing cystoscope.

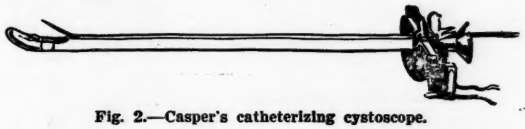

Fig. 2.—Casper's catheterizing cystoscope.

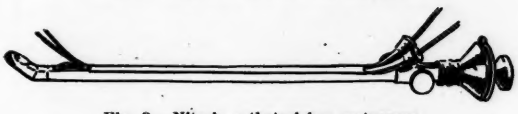

Fig. 3.—Nitze's catheterizing cystoscope.

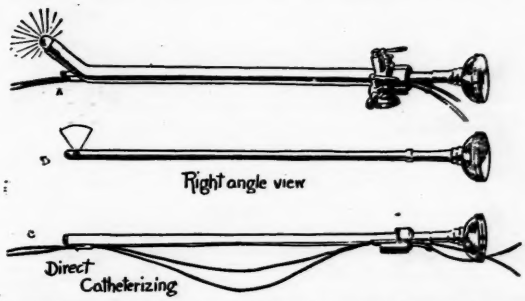

Fig. 4.—Tilden Brown's double-barreled catheterizing cystoscope, permitting synchronous catheterization of both ureters at one sitting.

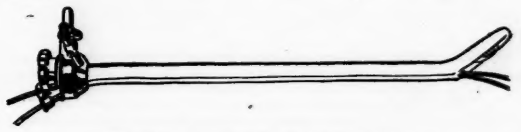

Fig. 5.—Bransford Lewis' air cystoscope.

than does the straight-view lens; but, as a matter of fact, neither one shows the whole of the interior of the organ: The right-angle lens can not show straight ahead toward the lower, posterior wall, nor can the straight-view lens show sidewise or retrospectively; and a pathologic process or growth situated at either point may readily escape detection by the lens that is inappropriate for exposing that locality. So neither the one nor the other of these two types of instrument fulfils the natural and necessary demands of complete cystoscopy.

The preference between the two types of instrument, the direct and indirect, for ureter catheterization, is also a proper subject for discussion. Under ordinary conditions and with normal bladders, the ureter openings are to be reached by either method, although there is this difference between them: In catheterizing by the direct method, the heel of the cystoscope is brought almost against the ureter opening (Fig. 8). The catheter passes out of its channel directly into the ureter opening, with scarcely any space to bridge over or prove a source of uncertainty and difficulty. When the indirect method is employed, the catheter emerges from the concavity of the cystoscope, a point which can not be brought against or even very close to the ureter opening; hence, more or less space must be bridged before the catheter reaches the opening (Fig. 9). A soft or flexible catheter is not the steadiest material one could desire under such circumstances. Another element of uncertainty is added in the movable lever for controlling the direction of the catheter. This is Albarran's device, now used on all cystoscopes that catheterize by the indirect method. From these considerations, it is probable that more skill and practice are required to execute harmoniously the several maneuvers incident to carrying out the indirect method than is true of the direct method. Abnormal conditions may alter the verdict.

Ordinarily, by elevating the outer end of the direct-view cystoscope, there is no difficulty in bringing the ureter openings into view for catheterization (Fig. 8), but occasionally a "precipitate" bladder is met with (Fig. 9), in which the ureter orifices are placed below a jutting prostate and outside of the field of vision of the direct-view lens. Under such circumstances, the indirect method is much more appropriate, and may, in fact, readily overcome the difficulty, or may be the only practicable route to the ureteral openings. It is again apparent, therefore, that one type of instrument alone can not meet the requirements of all the varying conditions encountered in the clinic.

AIR AND WATER AS DISTENDING MEDIA.

There has been much discussion as to whether air or water is the better medium for bladder distension in cystoscopy. My own views on the subject have undergone considerable change in the past few years, influenced, largely, by overcoming some of the difficulties that were formerly connected with the use of water in this capacity.

It can not be denied that water is the medium most suited to the bladder, and the one to which it has been accustomed all its life, so to speak; while air is distinctly irritating and very disagreeable to the bladder, although not dangerous, as has been claimed by some of our German confrères. Moreover, water is the better

medium for exhibiting papillomatous or fimbriated growths in the bladder. It floats their filmy strands in full and natural view before the eye, while air causes them to collapse in a mass against the bladder wall.

It is evident, therefore, that in ordinary cystoscopy and ureteral catheterization, if the difficulty due to hemorrhage and pus clouding the distending medium can be overcome, water is decidedly the medium of choice. This difficulty has been overcome. The universal cystoscope permits of rapid and effective change of fluid, even during the work of the operator. The large lumen of the sheath, through which the exchange of fluids is made, amply takes care of this feature. Consequently, for these two purposes, cystoscopy and ureter catheterization, air inflation has been practically discarded by me.

With respect to operative cystoscopy, however, other factors have a bearing and lead to a different conclusion. Then, it is not so much a question of the comfort of the patient (which can be taken care of by some form of anesthesia) as it is expediency in attaining the object to be accomplished, the removal of a growth by a snare; the extraction of a calculus from the lower end of a ureter; the dilatation or cutting of a strictured ureteral

Fig. 6.—Bierhoff's modification of the Nitze catheterizing cystoscope.

Fig. 7.—Schlagintweit's cystoscope. A, right angle view. B, full retrospective view.

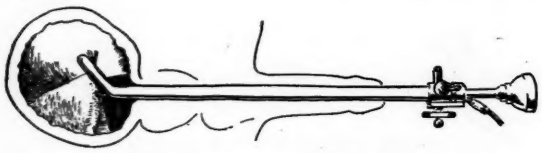

Fig. 8.—Direct ureter catheterization.

orifice, etc. Hemorrhage, sufficient to interfere, is much more liable to occur in connection with such manipulations as these than in connection with simple cystoscopy or ureter catheterization.

For these reasons, air is the medium employed with my operative cystoscope, while water is used altogether with the universal cystoscope.

A UNIVERSAL CYSTOSCOPE.

Impressed with the shortcomings of the cystoscopic armamentarium, overlapping here and proving deficient there; the disappointments involving my own early instruments, as well, I began, about four years ago, the endeavor to develop a cystoscope that would embrace in a single instrument the several features demanded for effective and comprehensive cystoscopy, together with ureteral catheterization; embodying, also, means for adequate irrigation and rapid exchange of fluids. Practical use of the instrument (Fig. 10) during the past two years has proved that the following purposes have been amply fulfilled by it:

(1) Direct, forward view; (2) right-angle (lateral) view; (3) retrospective view; (4) double, synchronous catheterization of the ureters by the direct method; (5) the same, by the indirect method;[3] and, finally, (6) an irrigation feature so satisfactory that it is commonly employed in preference to a catheter for washing out the bladder preliminary to cystoscopy; and, as previously mentioned, irrigation can be carried on during the working of the operator.

In the production of the instrument, the inestimable value of simplicity and freedom from complications has been constantly kept in mind. Problems of reliable insulation, of setting the cold lamp to best advantage, of protecting it from possible breakage, especially while within the bladder, and yet exposing its rays to both the convex and concave aspects, for illumination of the whole interior of the bladder; of reducing the outside caliber of the sheath to the minimum selected (No. 23, French), and yet permitting its carrying large enough telescopes to provide plenty of light and wide fields of vision—have engaged attention.

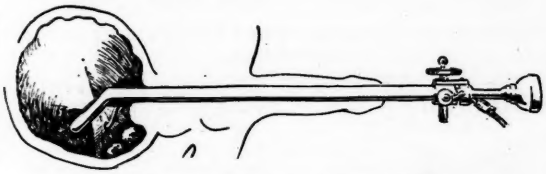

Fig. 9.—Indirect ureter catheterization.

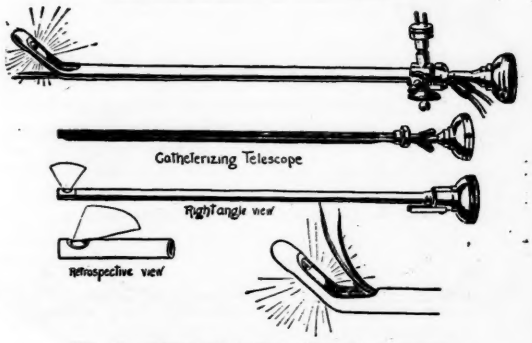

Fig. 10.—Bransford Lewis' universal cystoscope.

DESCRIPTION OF THE UNIVERSAL CYSTOSCOPE.

Employing an idea first submitted by Boisseau du Rocher[4] in 1890, a service sheath was utilized to carry an insulated wire, with a cold lamp in its beak. As it was contemplated to view every point in the bladder with this instrument, the beak was fenestrated on its concave and convex surfaces, the lamp being set base upward and bulb pointing downward, shedding its best illumination in the directions most needed.

The ocular and catheterizing apparatus is embodied in telescopes that are passed freely through the sheath, so that, after the sheath is once inserted into the bladder, it remains there until all manipulations are ended, the exchanges of telescopes being made thereafter, with the sheath in place, and without the patient's noticing it. The sheath is the irrigating channel already alluded to. Water is injected through it either directly or through one of the cocks at its side.

3. Details and working model completed, but not yet on the market.
4. Ann. d. mal. d. org. génito-urin., 1890, 1892, 1894.

While two different telescopes for the lateral and retrospective views are provided, experience has shown that the lenses embrace such a wide field that both views may be combined in the one telescope, which is both right-angle and retrospective. The same lens is also used with the indirect catheterizing telescope (Fig. (10). The direct catheterizing telescope supplies a good direct view, besides its catheterizing feature, and may be used for simple cystoscopy without catheterization, the catheter tubes being plugged at their outer ends to prevent the escape of the distending fluid through them. A larger, direct lens is furnished without the catheterizing feature.

TECHNIC OF CYSTOSCOPY AND URETERAL CATHETERIZATION.

It is probable that, with a good and efficient cystoscope, the greatest source of trouble or difficulty in cystoscopy arises from insufficient anesthesia. But that is

Fig. 11.—Postmortem specimen, showing a ureteral stricture which caused a dilated ureter, with subsequent destruction of the kidney, uremia and death of patient.

not to be interpreted as meaning that general anesthesia is frequently necessary. On the contrary, general anesthesia is very seldom found to be necessary for either cystoscopy or ureteral catheterization, local anesthesia, when properly and adequately administered, sufficing for the vast majority of all cases. In a number of cases it is not necessary to use even a local anesthetic, although I deem it undesirable and injudicious to subject a patient to a painful experience when it can be made a comfortable one without adding to the risk of the procedure.

During the past two years I have practically discarded cocain in my work of this kind. I now secure local anesthesia by the use of alypin tablets, deposited at the points of election by means of my urethral tablet depositor (Fig. 13). These tablets are made of appropriate size by the Schieffelin Company and contain 1⅛ grains of the drug each. In applying them the following plan is adopted: The patient first empties the bladder, or it is emptied for him by catheter, and washed with boric solution and again emptied. The depositor is inserted as far as the posterior urethra (the anterior urethra does not usually require anesthesia), where it is held while the obturator is withdrawn; a tablet is dropped into the depositor and shoved into the urethra by means of the obturator. After macerating in the mucus of the urethra a minute or so the tablet becomes a soft mass, which is then smeared over the adjacent membrane by to-and-fro motion of the depositor. Precise information can be obtained as to the disappearance of sensitiveness by inquiry of the patient. From two to four tablets may be used, according to necessity, in the individual case, and manipulations should not be begun until acute sensitiveness is reduced.

Fig. 12.—Freudenberg's catheterizing cystoscope.

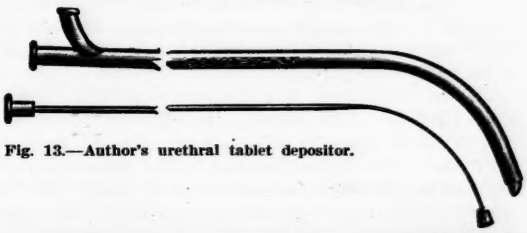

Fig. 13.—Author's urethral tablet depositor.

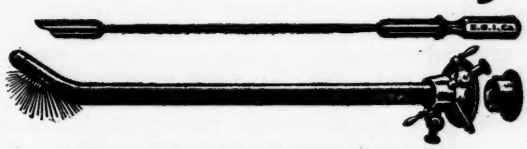

Fig. 14.—Bransford Lewis' operative cystoscope.

Fig. 15.—The accessories to Dr. Lewis' operative cystoscope.

POSTURE.

While several different positions are employed by different operators, I prefer the dorsal, with the legs supported by knee-crutches. With an extremely sensitive or a contracted bladder it is often of service to relieve the pressure of the fluid from the most sensitive area, the neck, by moderate pelvic elevation. Flexion of the thighs on the abdomen relaxes abdominal pressure and resistance, under similar circumstances.

After preliminary adjustment and turning off of the light the cystoscope is introduced into the bladder, five or six ounces of clear, warm water are injected through the sheath and allowed to flow out again. This is repeated as often as is necessary to clean the bladder, six

or eight ounces being left in for distension. The telescope first selected is run through the sheath, the light turned on and the observation is made. The cystoscope is moved about freely and turned on its axis, no danger coming from touching the walls of the bladder with a lamp that is only moderately warm. On finishing with the telescope first used, it is replaced by another in the manner previously mentioned, and thus the entire inner surface of the bladder, including the neck and prostatic outgrowths, tumors, calculi, etc., come within the observation of the investigator.

If, however, it is the intention to catheterize the ureters, too much time must not be spent in looking at the bladder before proceeding to the catheterization; the disappearance of anesthetic effect may be followed by resistance or bladder contractions that disarrange and hide the ureteral openings, possibly impeding or defeating the catheterization until renewed anesthesia is secured. The catheterization itself is accomplished in the manner usually described, there being nothing peculiar to this instrument, except that either the direct or the indirect method may be used. In order to insure their remaining within the ureters on the withdrawal of the cystoscope it is advisable to push the catheters from six to eight inches up into the canals, but when a ureter stone or a stricture is suspected they are sent up as far as the kidney pelves.

The urine drainage that ensues is steady and measured if the eye of the catheter is within the pelvis, but interrupted or comes in successive jets if lower down in the ureter. It is thus influenced by the peristaltic contractions of the ureter.

Some hemorrhage may become manifest in the urine drained if the catheter is roughly introduced or is pressed too far into the pelvis. When this is casual, and without material bearing on the diagnostic evidence, the red blood cells may quickly be cleared from the urine by adding acetic acid to the slide on which the sediment is placed. This not only removes the red cells, but clears up the nuclei of pus and renders the epithelium distinct.

MODE OF WITHDRAWING THE CYSTOSCOPE AND LEAVING THE CATHETERS IN PLACE.

(A) After direct catheterization; (B) after indirect catheterization.

(A) The water that distends the bladder is first allowed to escape through one of the cocks; the light is turned off and the cord disconnected. While feeding the catheters into the channels the cystoscope is, at the same time, drawn outward; when the beak end emerges from the meatus the catheters are grasped at that point and held while the instrument is being removed. Another mode is to withdraw the catheterizing telescope from the sheath until the catheters are exposed just beneath the shoulder, near the ocular end; there they are grasped and held while the telescope is removed, after which the sheath is in turn removed.

(B) After indirect catheterization the mode of removal is essentially the same, except that the cystoscope must be turned on its axis before withdrawal to bring the concavity forward in harmony with the natural curve of the urethra. This brings about crossing of the catheters within the bladder, and the extraction is not accomplished as easily as after the use of the direct mode; nevertheless, by care and practice it is accomplished. If found impossible in a given case the drainage may be secured before removal of the cystoscope.

Under ordinary circumstances cystoscopy and ureteral catheterization may be carried out in a well-equipped office, the patient suffering practically no pain and experiencing no ill effects afterward. It has been thought by some that bladder segregation of the urine is a simpler and less painful procedure. My own estimate, made after use of both methods, is that segregation, in addition to being of little reliability in diagnosis and of none in therapy, is really more arduous and painful than is ureteral catheterization and removal of the cystoscope.

LIMITATIONS OF CYSTOSCOPY.

Like every other surgical procedure, cystoscopy has its limitations. It can not be used, for instance, where there are urethral strictures too narrow to permit of the introduction of a cystoscope; although, of course, this is a matter in which the caliber of the cystoscope has a bearing. I have one cystoscope, caliber 18, French, which passes through a pretty small urethra. The caliber of the universal cystoscope is 23, French. The calibers of late European cystoscopes, as advertised in the latest catalogues of European makers, are, respectively, Nitze, 25; Kollman, 26; Wossidlo, 25, French. Large prostates sometimes render the introduction of a cystoscope difficult, but it is very unusual that cystoscopy is prevented for this reason.

It has been taught that the use of the cystoscope should be avoided in cases of urinary tuberculosis; that such instrumentation is liable to increase the seriousness of the situation. My experience leads me to believe that this is purely *a priori* reasoning, and, moreover, incorrect. Dr. Willy Meyer[5] expresses a similar belief. I have observed many cases of urinary tuberculosis in which, whether because of the cystoscopic and other local measures repeatedly made use of, or in spite of them, their progress has been that of extremely gratifying improvement or even definite recovery. And this to a degree of frequency that would not be expected from the older writings advocating the "expectant" or do-nothing plans. In tuberculous pyelitis, besides ureteral lavages with boric or other mild antiseptic solutions, I have injected iodoform oil through the catheters directly into the pelves and ureters, with beneficial effect. I can not agree that urinary tuberculosis proscribes the use, to a reasonable extent, of the cystoscope.

The limitations that were formerly imposed on the cystoscope by active hemorrhage have been practically removed in the manner already described. Since the universal cystoscope has been at my disposal I have not met with a case of vesical or ureteral hemorrhage sufficiently active to prevent its satisfactory use, either for cystoscopy or ureteral catheterization, although we have made use of it in carcinomatous cases, in which a continuous stream of blood was plainly visible, coming from some point within the bladder.

Objection has from time to time been made to ureteral catheterization on the ground of supposed danger of carrying infection from the bladder up into the ureters or pelves. Ground for this objection has been denied by all writers who have had large experience in this work. Considering the great number of instances in which ureteral catheterization is being carried out all the time, if there were any material evidence in support of the claim it would have been brought forward long since.

Pain has been done away with as militating against cystoscopy, as indicated in previous remarks. It is

5. New York Med. Jour., April 27, 1907.

taken care of, if excessive, by either local, spinal or general anesthesia.

Contracted bladder is not now so great a hindrance to cystoscopy as it formerly was. With two ounces of fluid, or even one ounce, sufficient space is given to make some use of the direct-view telescope, and possibly, also, of the indirect, in certain cases; and the cold lamp does not involve the danger of burning, even with so little fluid. Besides, the newer, wide-angle lenses do not require the distance for focusing that was formerly necessary to include a good field of vision.

AN OPERATIVE CYSTOSCOPE.

In connection with this subject it may not be amiss to present an instrument which as yet has not become widely familiar to the profession, although I have been making use of it since 1902-03, when the first model was completed for me. I refer to my operative cystoscope (Fig. 14). A detailed report of work with it was made before the Mississippi Valley Medical Association, Oct. 11, 1904.[6]

While it is possible that water might be used as a distending medium for it, I have always used air, for the reasons already indicated. This instrument is mainly a straight tube, without lens system, an ocular window serving to retain the air in the bladder, and at the same time permitting the passage of the several operative instruments through the small perforation at its lower edge. Air is pumped in through a cock, by means of a double rubber bulb, and warmed air is obtained by sucking it from above an alcohol flame. In the newest model a small channel runs along the lower wall of the cystoscope to take up, by aspiration, the excess of fluid that may collect in the bladder, this tube being connected with a vacuum bottle by rubber tubing. This excess fluid is also taken care of by posture, the patient being placed in a position of exaggerated pelvic elevation or in the knee-chest position.

The appurtenances supplied with the instrument are: Alligator forceps for intra-vesical work; flexible and inflexible forceps for ureter work; scissors; dilators of different kinds; probes, sounds, bougies, catheters, electrodes, for ureter work; knife, cautery and platinum loop, etc.

While this instrument has not so wide a scope nor so frequent application as the universal cystoscope, it, nevertheless, has a definite position in vesical and ureteral work that is highly desirable. With its assistance and without the necessity of opening the bladder to direct attack, small foreign bodies, calculi etc., may be removed; strictured ureter openings are cut or dilated with as definite precision as when the same measures are accomplished in the urethra; calculi, hung in ureteral orifices, are capable of removal by means of the forceps that are manipulated under the definite observation of the operator. The flexible ureter forceps, probably the most difficult of the appurtenances to perfect, is capable of passing one or two inches up into a ureter, where it may be opened and closed in the endeavor to grasp a stone that may be incarcerated there.

Granted that this operative set may not always accomplish all that could be wished of it, it will fulfil the objects required for a number of cases at least. It has already done that for me. And failure with it does not leave the patient any worse off than before, nor interfere with the adoption then of the radical, cutting operation, that may prove necessary. Numerous instances are reported in which the bladder has been opened to effect the removal of a stone projecting from a ureteral orifice; others in which the same radical measure has been undertaken to permit access to a strictured ureter opening. I believe it would be a rare exception in which these objects could not be accomplished with this instrument and its appurtenances, without resorting to such radical preliminaries. Figure 11 shows a postmortem specimen of a ureteral stricture, which had produced a dilated ureter, pelvis and destruction of the kidney, uremia and death, all of which might have been obviated had the patient submitted to investigation and treatment before he was *in extremis;* but that was the state in which he entered the hospital, dying immediately afterward. The merest incision of the narrowed orifice, made through the cystoscope before the serious involvement of the kidneys, would probably have given him a number of years of life, if it had not reclaimed him to health.

In cheering contrast to this is presented the *x*-ray demonstration, following catheterization of the ureters with catheters containing lead-wire stylets, of an individual possessing three independent ureters,[7] two of them healthy, the third infected with gonococci, the source of a recurrent gonorrhea for over five years, notwithstanding his active pursuit of relief at the hands of many practitioners during that time. Through the means mentioned, the anatomic anomaly was demonstrated; the physiologic phenomenon of supplying three different urines by one individual (differing in specific gravity and other physical characteristics), was proved; and through medicated lavage of the infected ureter, the source of infection was removed, and the patient permanently relieved. He has since married and has been healthy for over two years.

In further contrast to the lethal outcome of ureteral stricture, so graphically depicted in the postmortem specimen (Fig. 11), I would briefly mention the case of a female patient who was reduced from health to invalidism by recurrent attacks of ureteral colic, which became so severe as to require morphia and energetic sedative means. Cystoscopy led directly to the diagnosis of stricture of the right ureter, the contraction involving the lower end of the channel. Nothing could at first be introduced, but repetition of endeavors with a variety of ureter probes and sounds finally gained access, which was followed by dilators, until this ureter outlet became as large as its companion and gave free escape to the urine. The first urine drained from the affected ureter contained much pus, some of it collected into clumps that, by plugging the narrowed outlet, had been as effective as calculi could have been for causing recurrent colics and loss of health. The outcome of such a condition, unrelieved, could only have been the destruction of the corresponding kidney, with ultimate involvement of the opposite one, whereas, the opening up of the channel by means of the operative cystoscope was followed by complete relief from suffering, the clearing of the urine and the regaining of health, weight and strength. She has been well and free from the attacks now for four years.

This case, and others that might be mentioned, are adduced not in justification of the cystoscope, but merely in illustration of the great service it is capable of rendering in the diagnosis and therapy of genito-

6. Report on Operative Work in the Ureter through the Author's Catheterizing and Operative Cystoscopes, Lancet-Clinic, Cincin. March 4, 1905.

7. Med. Rec., Oct. 6, 1906.

urinary affections. The cystoscope needs no justification at my hands. It has an established position in the esteem of the profession, from which it can not be dislodged. But, while a large proportion of the profession are availing themselves of its assistance in both of these capacities, it is probable that a larger proportion are still viewing it rather as an attractive toy—to be admired when exhibited, but of less practical utility than enthusiasts would have them believe. And we still occasionally hear the sage advice given to determine the presence or absence of stone in a suspected kidney by exploratory nephrotomy and renal palpation; or the same means is advised for determining which is the more affected of two tuberculous kidneys, calmly ignoring the fact that the information on such matters given by ureter catheterization, drainage and urinalysis, is far more valuable; indicating, not how a given kidney may feel, but, what is far more important, its functionating capacity.

We still, sometimes, hear of the worse of two diseased kidneys being removed because the operator, neglecting ureter catheterization, has depended on symptomatology and exploratory palpation to guide him; when we know that the symptomatology of renal diseases is notoriously misleading, utterly failing in some cases of completely destroyed kidneys, or reversed in others, so that the painful symptoms abound on the healthier side and do not show on the side affected. These and other well known vagaries of renal symptomatology should prevent undue reliance being placed on it; and, at the same time, impel us to resort to complete and full physical examination in all such cases, the most important feature of which is the use of the cystoscope and ureteral catheterization.

SCOPE OF URETERAL CATHETERIZATION.

As indicative of the large sphere of usefulness and the wide range of information given by ureteral catheterization, alone, excluding that furnished by the cystoscopic views in the bladder, I may quote from a previous paper on the subject[8] as follows:

The purposes of ureteral catheterization are two-fold, for diagnosis and for treatment.

For Diagnosis.—(A). To locate the origin of pus, blood, tuberculous products or bacilli, the various pyogenic infections, abnormally desquamated epithelium, etc., as to whether they come from (1) the bladder, (2) the right ureter, (3) the left ureter, (4) the right kidney, (5) the left kidney, (6) the right or (7) the left peri-renal space, communicating with the corresponding kidney or ureter.

(B) To recognize and locate obstructive conditions in the right or left ureter from (1) stricture, (2) stone, (3) adjacent tumor, (4) bend or kink in the ureter from movable or dislocated kidney, (5) valvular junction of the ureter with its pelvis.

(C) To determine (1) the number of kidneys present; (2) if only one, which is absent.

(D) To determine the number of ureters present.

(E) To determine the functional activity of each kidney separately and relatively, with respect to its excretion of urea, albumin, quantity of urine, the specific gravity, etc.

(F) To determine the size and capacity of each kidney-pelvis, with respect to (1) hydronephrosis, (2) pyonephrosis, (3) total obliteration of secreting tissue.

(G) If there be kidney disease present, to determine (1) if only one kidney is affected or both; (2) if only one, which is the affected one; (3) if both, which is the one more affected; (4) if removal of the worse one be advisable, is the other one able to carry on kidney functionation sufficiently; (5) if removal of one be advisable and the other is capable of supporting life, will the operation remove the infection from the body, removing the possibility of dissemination or recontamination?

For Treatment.—(A) To enlarge narrowings or strictures at (1) the ureter openings, or (2) in the channels at any point; (3) by facilitating drainage through the increased ureter-caliber thus obtained, to assist in the improvement of pyelitis or pyonephrosis, unilateral or bilateral.

(B) To irrigate and medicate (1) the ureters, (2) the kidney-pelves, of one or both sides.

(C) To assist, by anesthetizing, lubricating or enlarging a ureteral orifice, the passage through it of a calculus or plug of pus, blood, etc.

(D) To use the ureter, after it is catheterized, as a guide in certain abdominal and pelvic operations.

(E) By prolonged catheterization and drainage of a ureter, to facilitate the cure of ureteral fistula.

DIAGNOSIS OF URETERAL CALCULI.

We often hear discussions on the respective merits of ureteral catheterization and radiography for determining the diagnosis of stone at some point in the ureter or pelvis. Impartial analysis of the conditions prevailing leads to the belief that the two methods should go hand-in-hand, each being complementary to the other, and neither being used to the exclusion of the other. Radiographs may show shadows from phleboliths, enteroliths or other foreign substances in the line of the ureters, so that it is always incumbent on the operator to determine by catheterization whether such a foreign body be within the ureter or not, and also whether it is causing renal disturbance, as attested by the urine drawn from the same source. On the other hand, a catheter meets with an obstruction in the ureter of a urinary patient, and it often requires the interpretation of the radiogram to determine whether the obstruction be from stone or kink or other cause. Such radiograms should be taken with the catheters in the ureters and loaded with fuse-wire, as suggested by Kolischer and Schmidt.

PHYSICIANS, SURGEONS AND CYSTOSCOPES.

While it can not be expected that every one who practices medicine or surgery must adopt the cystoscope into his personal use, devoting the time necessary to become skilled in its use, the same thing might be said with respect to the ophthalmoscope, the stethoscope or other appliances pertaining to special fields of work. As physicians and surgeons, we can not avoid the responsibility of securing the benefits of all such means to our patients, either by personal application or through others especially skilled in their use. It is gratifying to know that in our progressive country, and in this progressive age, there is hardly a town of any size to be found in which there is not a cystoscopist of sufficient ability and skill to give the service desired. The full force of this remark may not appear unless we review the instances, unfortunately not few in number, in which patients have drifted from bad to worse in urinary afflictions, soothed along, from month to month, on diuretics and "urinary tonics," so-called, nothing of real merit being

8. Ureter Catheterism: Its Purposes and Practicability, Ann. Surg., January, 1903.

done either in the way of diagnosis or therapy, "because," as the doctor naively explains, "I haven't any cystoscope, and wouldn't know how to use it if I had one." And the patient's opportunity for reclamation to health is wasted on such flimsy grounds! I now have under observation (I can offer them nothing better) four cases of carcinoma of the bladder, in which symptoms of the trouble had existed from three to five years before any definite plan for diagnosis or treatment was adopted. Each was fed on internal medicines and urinary "soothing syrups" until the condition became inoperable and plainly beyond the reach of any material aid.

1050 Century Building.

HARE-LIP AND CLEFT PALATE.

ALEXANDER HUGH FERGUSON, M.D.
CHICAGO.

A common deformity the surgeon is called on to correct is hare-lip, and not infrequently hare-lip and cleft palate are combined. While the operation to correct hare-lip is comparatively simple, so far as technic is concerned, much depends on carrying out the few necessary details with great precision and care. In cleft palate the conditions vary so much that it is impossible to make use of any one procedure that has been devised to correct this deformity in all cases. The case must be studied carefully and then the surgeon must decide which operation is the most suitable one to employ.

To make clear a few principles involved in both these operations I shall consider the two conditions separately.

HARE-LIP.

Clinical Varieties.—The defect may be (1) unilateral; (2) bilateral; (3) median; (4) complicated by cleft palate, single or double; and (5) later, where the fissure extends up to the eye, etc.

Time to Operate.—In uncomplicated cases of hare-lip, no matter what the nature of the defect, the operation should be done soon after birth, on the same day, if possible. The impaired prehensile powers of the infant prevent its taking nourishment properly, and thus lead to malnutrition and non-development. If the infant is too feeble to permit of an operation, a competent nurse should be placed in charge, one who understands feeding and diet, so that the operation can be done inside of two or three weeks, under favorable conditions. It is also wise to defer operation until after the period of dentition. For this reason parents should be urged to have the operation done before the teeth begin to erupt, but if dentition has begun, then wait until the teeth have erupted.

When the hare-lip is complicated by cleft palate the time for repairing the lip must depend on the degree and kind of bone deformity present. Surgeons are not in accord on this point. My own practice is to restore the normal shape of the alveolar processes first, and at the end of a week to operate on the lip. I find that when the lip is sutured over a premaxilla that was wired to the superior maxillæ, and in the cleft between them, a week previously, great strength and protection is given the bony framework, and the tendency for the premaxilla to become loosened is overcome.

Principles Involved.—Although cheiloplasty is a minor operation, it is essential, as stated before, to observe carefully certain fundamental principles. These involve (1) denudation, (2) coaptation, (3) retention, (4) conformation, and (5) cleanliness. The edges of the cleft must be freshened without removing any tissue, so as to leave broad surfaces which favor more accurate coaptation. This is done best by making flaps from the edges of the cleft, swinging them backward, and then coapting them. Economy of tissue is to be aimed at in all procedures carried out to remedy congenital defects. The broader the surfaces for coaptation, the more certainly will primary union take place. Coaptation must be perfect, and retention by sutures accurate and without tension.

The objective point should be the formation of a normal upper lip, so as to obliterate even the suggestion of the pre-existing deformity. The nature of the deformity often is such that this object is defeated, but the surgeon should exercise his ingenuity to the utmost so as to do the best he can under the circumstances.

While absolute surgical cleanliness can not be attained in operations on the lip, the results are best when asepsis and antisepsis are carried out rigidly.

THE FENGER OPERATION.

The late Dr. Christian Fenger devised a most excellent operation for hare-lip,[1] the principles of which I carry out in my practice. These are: (1) The removal of no tissue; (2) the approximation of wider raw surfaces than in the older operations; (3) the application of three rows of sutures, (a) skin, (b) mucous membrane, and (c) tension sutures.

The incision, in both single and double cases, was made at the junction of the skin and mucous membrane, imitating in this particular the flap-splitting perineorrhaphy of Lawson Tait. The two flaps are made to turn posteriorly and coaptation of the raw surfaces is accomplished by means of retention and skin sutures (Figs. 1 and 2). Dr. Fenger always used silk for all his sutures, but I prefer horsehair for the skin and retention sutures, using for the latter two hairs in each suture. Fenger also applied a strip of adhesive plaster, extending from ear to ear, to relieve tension. If there is any doubt as to whether or not there is tension, it is best to separate the lip from its attachments on each side until tension is relieved. I do this by thrusting a sharp periosteal elevator or a pair of scissors through a small incision under the lip, close to the gum, at a little distance from other wounds, and then elevating the cheek from the bone.

In addition to these measures I employ oxid of zinc adhesive plaster as follows: Take a strip of plaster one inch wide and about twelve inches long, place the center of the strip beneath the chin, pull firmly on both ends, allow the plaster to adhere to both cheeks well back, and then cross the plaster over the nose on to the forehead. Where the plaster passes over each eye, roll the strip on itself into a cord. This effectually prevents tension on the sutures, even when the child is crying. The line of incision should never be sealed either with collodion or plaster.

THE NOSTRIL.

It is exceedingly difficult, but none the less essential, for cosmetic purposes, to construct a normal nostril. To do this one must do an osteotomy on the side opposite the cleft. To make the deficient nostril of the same size as its fellow, it is a good plan to insert into the nostril a sound of the same size as the naris and then suture the nostril over this. If the cartilage of the

1. THE JOURNAL A. M. A., Aug. 1, 1891, p. 176.

nose is supported, make multiple submucous sections of the cartilage and plug the nostril with medicated gauze wrapped around a soft rubber catheter. This is left in place until the cartilage has united, or until the contour of the nose is restored. In some cases I have found it necessary to support the nasal septum at its base, shifting it to the desired size. The crux of the entire procedure is the restoration of the bony framework by an osteotomy.

CLEFT PALATE.

Clinical Varieties.—The clinical varieties of cleft palate are (1) incomplete, (a) bifid uvula, (b) bifid soft palate, (c) partial cleft of the posterior border of the hard palate, and (d) fissure of the alveolar process and anterior border of the hard palate; (2) complete, (a) single, and (b) double; (3) complicated with hare-lip, single or double.

A cleft-palate operation is a major operation, and for that reason it should seldom be performed at the same time as a hare-lip operation. The younger the patient the graver the operation. In the case of extensive clefts it is not advisable to close the entire cleft at one sitting, but defects always should be repaired before the child begins to talk. The result is best when the operation is done at a very early age. Any plastic work that offers a chance of success is justifiable.

The earlier the deformity is rectified the less defective will be the speech, but the surgeon must never guarantee that nasal intonation will be prevented or cured. In infants a few weeks old the mouth is small, the tissues are friable, and there is a tendency for the flaps to slough. As in the case of hare-lip, and for even greater reasons, because of the greater severity of the operation, the child should be perfectly well before any operation is undertaken. If there are present either adenoids, enlarged tonsils or any other pathologic conditions these should be removed. The day before the operation a dose of castor oil and a few doses of strychnin should be given. Irrigating the mouth with antiseptic lotions for several days before the operation is contraindicated.

CROWDING PROCEDURES.

If the cleft is wider than half an inch, no attempt should be made to close it at the first sitting, but one or more crowding operations must be done to lessen the width of the cleft. In this case Langenbeck incisions are made, and gauze is packed firmly into the wounds and beneath the periosteum, so as to crowd the soft structures of the palate toward the center. The gauze is left in place until it begins to loosen, after a week or more, when a second packing may be inserted, but usually this is not necessary, for at this time sufficient granulation tissue is formed to hold the soft tissues in their new position.

This crowding process is most suited for cases in which there is a Norman rather than a Gothic arch—where the segments of the palate are horizontal. In such cases the flaps are short, and with the older methods great traction is necessary to bring the pared edges in apposition. To this fact may be ascribed the numerous failures in cleft-palate operations. When the bony edge of each segment is not well covered by mucous membrane, even though the cleft is narrow, a crowding operation must be done before an attempt is made to close the cleft. The more vertical the slope of the palatal segments the more favorable is the cause for operation by old methods.

Fig. 1.—Author's hare-lip operation, showing inner sutures and retention sutures in place; skin sutures ready for tying.

Fig. 2.—Author's hare-lip operation; all sutures tied and operation completed.

AUTHOR'S OPERATION. A.

It is unnecessary at this time to enter into the details of an operation which I perform in certain cases and which was published some years ago.[2] I described the method of dealing with the os incisivum, also called the premaxilla, and the ethmo-vomerine septum. It is very essential to deal carefully and properly with these two structures, because much of the success of the operation depends on this step. I have performed this operation in several hundred cases with unvarying success.

The operation I described then is not a flap-splitting, but a flap-formation operation, the flaps carrying with them two narrow strips of firm, strong, buccal mucous membrane of the palate. These flaps are held in position by means of sutures inserted on the upper surface. An ideal protecting roof to the raw surfaces beneath them is afforded, and the nasal mucopurulent discharge

2. THE JOURNAL A. M. A., May 19, 1900.

is shed off to either side. The results obtained by this operation are vastly better than those obtained by the Roux-Warren method. I have had only one primary failure. No tissue is removed, and the danger from sepsis is minimized by turning the flaps upward and by inserting a gauze packing.

AUTHOR'S OPERATION. B.

As stated before, the operation must be selected for the case, and not *vice versa*. To meet this condition, I have employed an operation with much success in cases where the roof of the mouth is like a Gothic arch—where the palate segments extend upward into the cleft in a more or less oblique manner, and where the cleft extends into one nostril. Two mucoperiosteal flaps are liberated —one from the inner or nasal segment, and the other from the outer or oral segment. These flaps are overlapped, bringing the two raw surfaces in contact, and holding them in position by two rows of interrupted silk sutures. This operation is suitable at all ages.

A mucoperiosteal flap (Fig. 3) is taken from the nasal septum and inner segment of the hard palate,

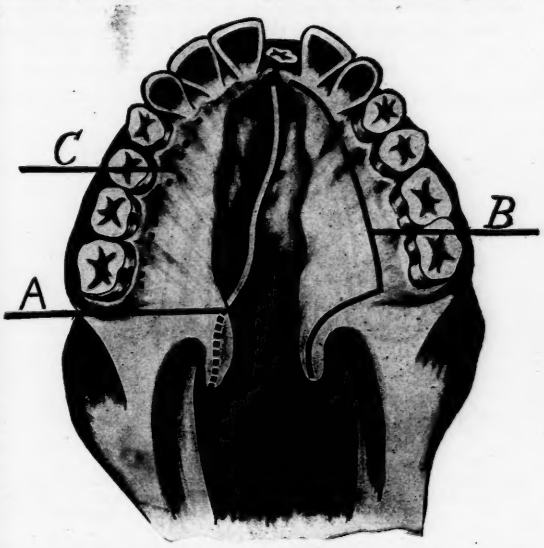

Fig. 3.—Author's cleft-palate operation for selected cases. A, line of incision through mucous membrane and periosteum on the nasal septum; B, same on the oral aspect of the hard palate on one side; C, point to which mucoperiosteum is raised.

commencing as high in the nose as possible, and liberating it from above downward to a point where it is hinged to the hard palate along the border of the teeth. Extend this incision in the under surface of this segment of the soft palate and uvula, so as to cause the completed dissection to form one large flap from the hard and soft palates. The second flap (Fig. 3) is formed from the outer segment by making an incision along the teeth down to the bone, and with a periosteal elevator detaching a mucoperiosteal flap until it is hinged by the mucous membrane along the inner border of the bone segment.

The soft palate and uvula segment on this side are then split along the anterior surface. The mucous membrane of the first flap faces downward, while that of the second flap faces upward, so that raw surface is placed to raw surface, the flaps being held in position by two rows of sutures (Fig. 4). The roof of the mouth is thus converted into a Norman arch.

In all the cases in which this operation was done, the speech (if the patient was old enough to talk) was improved. In order to benefit speech further, and to lessen the nasal twang, the patient should either begin to learn another language and forget the mother tongue (Ochsner), or be placed in charge of a teacher who has made a special study of this class of cases, one, for instance, who instructs deaf and dumb children (Owen).

DAVIES-COLLEY OPERATION.

In 1890, Davies-Colley published his method of operating in cases of cleft palate by forming mucoperiosteal flaps. In 1894 he published another paper on the same subject, but extended the method to include clefts of the soft palate. Figure 5, AB, represents an incision at the junction of the hard and soft palates, close to the last molar tooth, passing to the bone of the hard palate and through the soft palate. The mucoperiosteum is raised

Fig. 4.—Author's cleft-palate operation; imbrication of the mucoperiosteal flaps and of flaps of the soft palate.

from the posterior half of the hard palate and all the soft structures are crowded inward. It is my practice to pack this wound with iodoform or similar gauze. This incision passes through the tensor palati muscle on the oral and the levator palati on the nasal aspect of the palate. I consider it necessary to cut the levator muscle only in exceptional cases.

Figure 5, CD, is the line of incision on the same side, situated about a quarter of an inch from the margin of the cleft, and extending the full length of the cleft, but, as the knife approaches the soft palate, the incision is made to converge to the edge of the cleft, care being taken not to penetrate the soft palate while splitting it. The mucoperiosteum internal to this incision is forced from the bone by means of a periosteal elevator until it remains attached by the soft tissue which covers the margin of the cleft.

When the soft tissues over the border of the cleft in the hard palate are very thin, I prefer to use a chisel along the margin of the hard palate rather than to pene-

trate the soft tissues, cutting through the bone close to the thin margin, thus allowing a strip of bone to go with the flap. Figure 5, EFG, marks out the large flap that is to be raised from the bone to bridge the cleft, and the mucoperiosteal flap that is to be turned over to meet its fellow on the opposite side.

The next step consists in suturing these three flaps in place (Figs. 6 and 7). This uranostaphylorrhaphy is

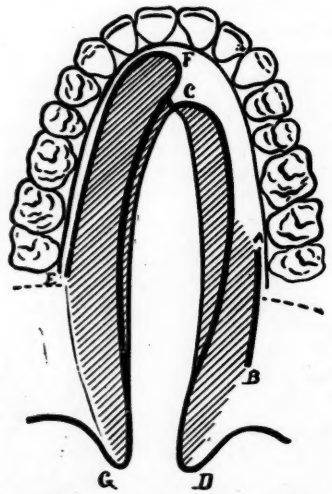

Fig. 5.—Davies-Colley operation for cleft palate. AB, incision for cutting tensor palati muscle; CD, incision for mucoperiosteal flap; EFG, incision for two mucoperiosteal flaps.

suitable for wide clefts. It is also applicable to secondary operations but is not suitable to every case of cleft-palate. The saving of tissue and the large extent of raw surface for coaptation are commendable features. Davies-

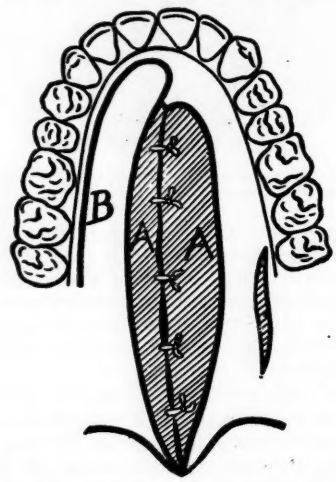

Fig. 6.—Davies-Colley cleft-palate operation. A, A, two flaps of hard and soft palate; B, tongue-like flap.

Colley never knew the flap to slough. In 1896 I operated on an infant, 1 month old, by this method, and I am sorry to say that the large flap died. Davies-Colley did not employ the method in the case of young children, but I have done so, even in infants, and with excellent results.

LANE'S OPERATION.

In 1905 Mr. W. A. Lane published his mucoperiosteal flap method, which is similar to the flap method I published in 1902.[3] The similarity is in the imbrication of large mucoperiosteal flaps. In cases of very wide clefts in the newborn, Lane does not hesitate to include in the flaps the mucoperiosteum of the alveolus and the mucous membrane of the cheek. This I have not done where it is most applicable, that is, in infants. In the case of a young man, 27 years old, I removed decayed teeth from the upper jaw, all except the incisors. It then occurred to me to bite off the entire alveolar process from which the teeth had been removed, with the object of eventually borrowing the tissues from this locality, as Lane recommended in the case of infants. This furnished exactly the flap required to close a very large cleft.

In my opinion, however, any plastic operation on the soft structures, coextensive with the indications to close the cleft, is better than an operation on the bones. Mr. Lane operates by choice the day after birth. To illustrate his method, I have taken Figures 8 and 9 from his work. An incision is made along the entire outer aspect of the gum, as is shown by 1. Two incisions are made

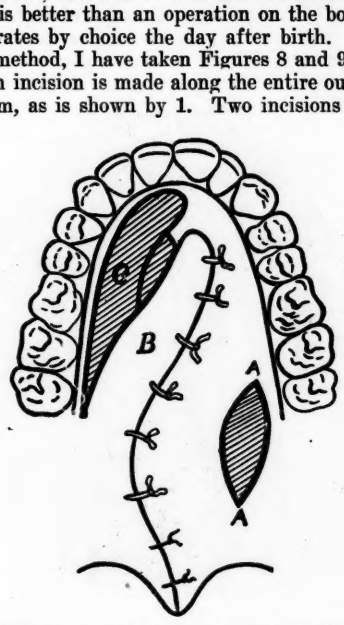

Fig. 7.—Davies-Colley cleft-palate operation. AA, relaxation incision; B, tongue-like flaps sutured across the roof of the mouth; C, raw surface.

in the direction of 2, and two others along the free inner margins of the cleft. The flap included between 1 and 2 on either side is turned back, and the flaps between 1 and 2 and 3 are raised from before backward, care being taken not to separate their attachment and to avoid injuring the descending palatine vessels. These flaps are then displaced inward (Fig. 9), their opposing margins being sutured together and to the adjacent flap and, if possible, also to the septum. At a later period Mr. Lane closes the posterior portion of the cleft in the soft palate.

THE BROPHY OPERATION.

Another well-known operation is that devised by Brophy, of Chicago. This operation consists in forcing together the two superior maxillæ by means of two stout silver wires, which are passed laterally through the jaws from one alveolar process to the other, and then fastened

3. Annals of Surgery, October, 1902.

to lead plates. The approximation is effected by twisting the wires over the plates. If the bones do not come together easily, the malar process on each side is cut through. The edges of the cleft are vivified and coapted by means of fine silver wire. It is claimed that no tension is put on the soft palate when the sutures are tied. This is true. In cases of hare-lip and cleft palate, Brophy operates on the palate first.

Mr. Edmund Owen, of London, favors this operation. He says:[4] "Since becoming more fully acquainted with this method, I have adopted it, and, although I realize that its performance is not unattended with increased risk, I consider the advantages associated with it so great that the extra risk may be accepted unhesitatingly." Mr. Owen performed no less than six operations to secure perfect closure in a case of unilateral hare-lip and cleft palate. This is the class of cases in which I proceed as follows: (1) Osteotomy, (2) hare-lip operation in one week's time, (3) uranostaphylorrhaphy. The work is completed within two months after the child is born.

There is no doubt that Brophy's operation contracts the palate and brings the teeth of the upper jaw in contact with those of the lower jaw. Brophy says that if normal contact does not occur, the arch can be expanded and the deformity rectified. While in Brophy's

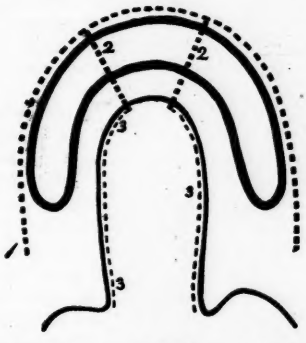

Fig. 8.—Lane's cleft-palate operation. 1, incision along gum margin; 2, incisions from 1 to edge of cleft; 3, incisions along inner free edge of cleft.

operation the palatine attachments of the tensor palati and the levator palati are not interfered with in the least, still it has to be shown that the intonation is better than that obtained by other plastic operations.

The objections to Brophy's operation are: (1) Shock, (2) sepsis, (3) contraction of the palate and the irregular contact of the teeth, (4) its limited application. It is only of use in the case of infants under 3 months of age. I have lost two patients by the Brophy operation.

Mr. James Barry states that of eleven patients operated on in this country of whom he had knowledge five died. Several surgeons favor the operation and report good results, with a low mortality. The claim made by Brophy that shock is less severe in the case of infants operated on soon after birth than at a later period in life may, I think, be explained not on a scientific or practical basis, but on the ground of Brophy's enthusiasm. How often have we seen the upper maxillæ severely fractured and even separated from the other bones by violence and not have any marked shock follow? Practical experience has shown that infants do not bear

4. Medical Monograph Series, 1904, iv, p. 46.

major operations well, and that the younger the person the greater the shock after traumatism.

CAUSES OF FAILURE.

Although very commonly vomiting, tearing out of the stitches, hemorrhage, swallowing solid food, allowing the infant to put its fingers into the mouth, and various diseases are recognized as causes of failure, the chief causes are: (1) tension, (2) unskilfulness and devitalizing the tissue by bruising, etc., (3) unsuitable local and constitutional conditions, (4) failure to select a suitable operation for the case, and (5) poor nursing.

When the soft palate is pared and sutured, as in the Roux-Warren staphylorrhaphy, it is put on great tension, and failures were common because of the stitches tearing through. Sir William Fergusson (1875) made the first marked improvement in the operation. To relieve the tension caused by the palatine muscles, he divided the levator palati, palato-pharyngei and palato-glossi muscles on both sides. This improvement was soon adopted by other surgeons. Agnew, of Philadelphia, in 1860, advocated cutting the tensor palati muscles close to the hammular process of the sphenoid bone, thus obtaining the necessary relaxation. Pollock, of London, did the same thing. If Fergusson had packed the wounds with iodoform gauze (not then in use) to pre-

Fig. 9.—Lane's cleft-palate operation. Flaps brought down and approximated to close cleft.

vent infection, many of the bad results noted would never have occurred.

RELIEF OF TENSION.

Garretson applied a horseshoe-shaped clamp to the jaws and forced them together. Brophy relieves tension in cases of uranostaphylorrhaphy by means of wires and plates, but when only a staphylorrhaphy is done lead plates are applied to the soft palate, with retention sutures. Langenbeck employed two lateral incisions, one on each side, close to the teeth, and encroaching sufficiently on the soft palate to relieve tension when the mucoperiosteum is raised from the bones. Billroth fractured the hammular processes and crowded the tendon of the tensor palati over to the middle.

When the cleft in the soft palate is not very wide, two or three sutures of medium-sized silver wire, inserted well beyond the edges, will relieve the tension. The retention sutures must penetrate the entire thickness of the palate. In overlapping the mucoperiosteal flaps, as in the Davies-Colley, Lane and my own operations, no other special provision is generally required. Dr. C. H. Mayo relieves the tension by means of adhesive tape

passed around both mucoperiosteal flaps and fastened by tying thread around the overlapped ends of tape.

As stated before, poor nursing is a fruitful cause of failure. As a rule, the mother is the worst nurse to place in charge of the patient. She is overcome by her sympathy for the patient, and rarely ever appreciates the necessity and importance of surgical cleanliness. For this reason the surgeon should insist on having the patient placed in a hospital where he can have full and complete control of everything bearing on his case.

Clinical Notes

A PORTABLE APPARATUS FOR EXTENSION AND FIXATION

WHILE APPLYING PLASTER-OF-PARIS DRESSINGS.

E. L. SANDERSON.
Interne and Ambulance Surgeon Charity Hospital.
NEW ORLEANS.

To broaden the field of usefulness of plaster-of-Paris splints, I have devised a portable apparatus for extension and fixation, which when closed forms an attractive carrying case, and is carried as easily as an ordinary heavy suit case, and which may be opened, extended and adjusted to any

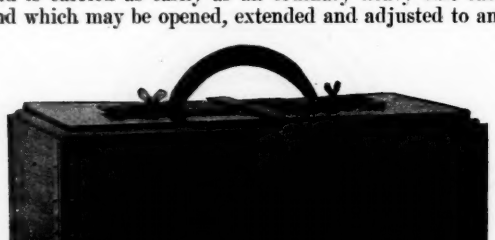

Fig. 1.—Apparatus closed as a carrying case.

sized patient within five minutes' time. Within this closed case are carried plaster-of-Paris bandages, cotton wadding, plaster knife and shears, etc., for the largest cast.

The case is made of hard wood and measures 24 inches long, 12 inches wide and 10 inches high, and it is supplied with a stout detachable leather handle (Fig. 1). This box, except the bottom, is cut half in two and hinged across the top so that half the box leaves the bottom and folds upward and backward on the stationary half. The three up-turned 10x12-inch leaves, two half-sides and the end, are each folded outward until they fall within the same plane as the folded-back half cover to which they are hinged. In this position they are maintained by the bearings of their irreversible hinges. This gives a rest 12x12 inches for the shoulders and a 10x12-inch rest for each arm and one of the same size for the head. Each rest is well padded with felt and covered with leather (Fig. 2); these surfaces form the inside of the case when closed. On the true floor is a sliding floor guided by a slotted metal strip, which may be drawn out to any degree and made rigid by a thumb screw. Across this adjustable floor are two strong metal plates, one at center and the other near the end. On the center plate is screwed and brazed an upright piece of stout tubing about 8 inches long, into which telescopes a second piece of tubing, around which is brazed a thin metal plate to support the buttocks. A thumb screw allows this support to be raised or lowered at will. On the ends of these transverse plates are brazed four hexagon cuffs, through which two hexagonal tubes pass snugly, and which are supplied with small set screws to make the tubes stationary at any degree of extension desired. These 20-

Fig. 2.—Apparatus ready for use.

inch tubes are 1 inch in diameter, are of spring brass or steel, and diverge at the same angle as the limbs of a patient when in the most desirable position for the application of a splint. As the foot pieces become more widely separated as the tubes are extended, the angle does not have to be changed, but is suitable to all lengths of individuals.

On the distal ends of these tubes are screwed and brazed cuffs through which small set screws make fast the smaller 22-inch tubes which are telescoped by the larger ones. Within this second tube is telescoped a hexagonal steel rod, the distal two-thirds of which is threaded, and which is drawn out or in by the turning of a swiveled hand nut on the end of the smaller tube. On the end of this steel rod is screwed and brazed an ordinary pipe elbow, into the upright of which is screwed and brazed an 8-inch piece of stout tubing of small caliber. Into these upright tubes, which lean slightly outward, are telescoped 8-inch steel rods, on the ends of which the metal sandals are brazed.

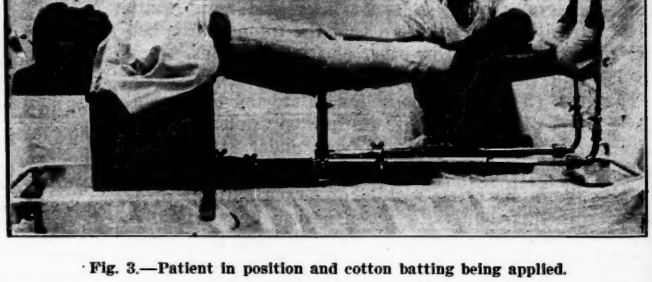

Fig. 3.—Patient in position and cotton batting being applied.

The are adjustable to any height by small set screws (Fig. 3).

The advantages of this apparatus are many: For all varieties of fractures of the femora, hip dislocations or fracture of the vertebræ, and for Pott's disease, it is indispensable. In hospital work its superiority over the very desirable apparatus of Dr. Lorenz, which is practically the only successful device for this work ever used here, consists in its comparatively low cost, its elegant

finish and appearance, convenience of being out of the way when not in use and its adaptability for plaster corset work, which is not the case with the Lorenz instrument. And last, and most important, is its transportability from plaster rooms to wards, dressing rooms, *x*-ray room or private homes.

This apparatus may be placed on an ordinary roller table, and the patient lifted from the bed into position and partially extended, which gives immediate relief from the pain in nearly all bone lesions. Then he is wheeled to the *x*-ray room, and the proper extension is applied under fluoroscopic observation; then to the plaster room and the cast is applied, and, if necessary, back to the ward until the cast is hard, giving the patient pain but once. In private practice its advantages need not be mentioned, as they are quite apparent.

This device complete can be made by any good instrument-maker or by a good machinist, and costs about $70. This includes the best materials and all metal parts nickeled. There are no parts to wear or break, and when well made the apparatus is exceedingly handsome and forms an important adjunct to any surgeon's armamentarium.

AN ILLUMINATED EYE SPUD AND KNIFE NEEDLE.

ROBERT L. CARSON, M.D.
ROCHESTER, N. Y.

To remove a foreign body from the cornea with dexterity and without undue injury, particularly where the object is small, and difficult to see, one often requires three hands, one hand to hold the lids, another for the eye spud, and a third to condense the light on the eye. Every physician knows how difficult and awkward it is to hold a patient's lids and with the same hand try to condense the light on the cornea.

With the end in view of rendering this common operation easy of performance, I devised an instrument which does away with the need of an extra hand to condense the light on the cornea. Briefly, this is an instrument which combines the spud and light, consisting, as originally devised, of a handle about five inches in length, through which run the wires to a tiny incan-

Author's combined illuminated eye spud and knife needle.

descent condensing lamp at its end. A short distance from the end of the handle is a clamp into which is fastened a spud of sufficient length, and bent at such an angle as to bring its tip into the center of the circle of light thrown by the lamp.

Such an instrument was made in accordance with my idea and on my suggestion, but the manufacturers have since modified and somewhat improved it by reversing the position of the light and spud. As now made the spud is attached directly at the end of the handle, the light being thrown on the field at an angle through an arm thrown out from the side of the handle. This makes a somewhat better instrument by lessening the shadow thrown by the spud. The same instrument, with a knife needle in place of a spud, is admirably adapted to the performance of the operation for secondary cataract, where the illumination is of so great importance.

Special Article

VIENNA AFTER THIRTY-FOUR YEARS.

WILLIAM OSLER, M.D.
Regius Professor of Medicine at the University of Oxford.
OXFORD, ENGLAND.

I spent the first four months of 1874 here. I came from Berlin with Hutchinson, an Edinburgh man (Sir Charles F., who has recently died), and we lived together near the *Allgemeines Krankenhaus*. As illustrating the total blotting out of certain memories, particularly for places, I may mention that strolling to-day up the *Alserstrasse* I could not recall the street, much less the house, where we had lived for the four months. I found my way readily enough to the *Riedhoff*, where we were in the habit of dining, and where I first met my old friends, Fred Shattuck, E. H. Bradford, E. G. Cutler and Sabine of Boston. An extraordinary development has taken place in the city within thirty years, and I scarcely recognized the *Ringstrasse*. Then, only the foundations of the new university buildings and of the *Rathaus* had been begun. Now these, with the parliament house, the courts of justice, the twin museums of art and natural history and the new Bourg Theater, form a group of buildings unrivaled in any city.

THE GERMAN CONGRESS FOR INTERNAL MEDICINE.

The primary object of my visit was to attend the *Congress für Innere Medizin*, and I had the pleasure of having with me my old student and friend, Dr. Joseph H. Pratt of Boston. We reached Vienna in time for the preliminary Sunday evening social gathering in the *Kursalon* of the City Park. Here we found a greeting in true German fashion and a hearty welcome from the president, Professor Müller of Munich. The work of the congress began at sharp 9:30 on Monday morning with a discussion on the "Relation of the Diseases of the Female Generative Organs to Internal Maladies." Unfortunately, the large University Hall, in which the meeting was held, was most unsuitable. Though seated not very far away, Professor Rosthorn's remarks were almost inaudible. It is a miserable mistake in introducing a discussion on any subject to speak for more than half an hour, but to continue for an hour and a quarter is too much for human endurance, and a great many did not wait for Professor Lenhartz's discussion of the problem from the standpoint of internal medicine. Nothing new was brought out, and so far as I could gather, Professor Rosthorn took much the same ground as Clifford Allbutt in his well-known Goulstonian lectures dealing with the intimate relationship through the sympathetic nervous system of the generative functions with those of the other organs.

Quite an animated discussion followed, in which Stintzing, Turban, Klemperer and others took part. Dr. Singer read a most interesting paper on "Intestinal Diseases in the Climacteric," calling attention particularly to frequent hemorrhages which he had known to arouse suspicion of malignant disease.

In the evening the city fathers gave a magnificent banquet to the congress in the superb hall of the *Rathaus*. At three long tables were seated some 600 guests.

On Tuesday morning Professor Neisser of Breslau opened the discussion on the "Present Position of the Pathology and Therapy of Syphilis." This was a splendid address, delivered without notes, in a good clear voice, and the subject matter arranged in a most orderly manner. He dealt particularly with the three points brought out by recent investigations—Schaudinn's discovery of the spirochete, the discovery of Metchnikoff that apes could be infected, and the discovery of Schaudinn that the fluids of infected persons reacted specifically. He dealt very fully with his own experimental work in Java, much of which has appeared, but it was particularly interesting to hear the relation of the extraordinary influence of atoxyl on the infected animals. It acts as a specific and prevents the development of the spirochetes, so that if given soon the disease could be completely stopped, and later the animal reinfected. Neisser was followed by Professor Wassermann, who described with great clearness his studies on the specific reaction. We have now apparently a diagnostic means by which the presence of the disease may be definitely deter-

mined at a very early stage. As the reaction may be present before secondary symptoms appear, it will have a very important influence in early treatment. The general expression of opinion is very favorable to the method. Professor Finger spoke of it to me in the warmest terms. It persists after all clinical symptoms have disappeared, and a positive response in locomotor ataxia and in general paralysis clinches the question of the true syphilitic nature of these maladies. Both Neisser's and Wassermann's addresses were models.

One of the most important communications of the congress was from von Noorden's clinic. Two of his assistants have been carrying on researches on the "Mutual Relations of the Pancreas and Thyroid." For many years von Noorden has had the idea that there was some important mutual influence between these two organs. The remarkable fact comes out that in animals from which the thyroid gland has been removed it is impossible to produce diabetes by any of the known methods, not even by the Claude Bernard puncture of the medulla.

Of the third day of the congress I saw but little. Professor Schmidt of Halle introduced a discussion on "New Clinical Methods of Investigating the Functions of the Intestine," in which he went over his recent work very fully, most of which has already been referred to in THE JOURNAL.

DINNER TO THE CONGRESS.

At the dinner of the congress His threw out the interesting suggestion (apropos of the presence of Grünbaum and Trevelyan from Leeds, Pratt from Boston, Barr from Portland, Ore., and myself), that the time had come to have an International Congress for Internal Medicine. The physiologists, the laryngologists, the alienists and others have such gatherings, and there now exist in France, Germany and Italy, England and the United States special societies devoted to internal medicine. A congress once in four or five years would be most helpful. We should get to know each other and be able to appreciate better the work done in different countries. Professor Schultze of Bonn gave his usual humorous sketch of the proceedings of the congress, which was greatly appreciated. A ripple of excitement spread around the tables when it was noticed that the places in the orchestra of the pianist and the first violin had been taken by von Neusser and His. The members gathered around the elevated gallery and the distinguished artists were greeted with loud applause and had a vigorous encore.

THE VIENNA LIBRARIES.

Prof. Max Neuburger, whose name is so well known in association with Pagel as editor of the "*Handbuch der Geschichte der Medizin*," very kindly arranged to show me the points of interest in the Vienna libraries. I may mention, by the way, that Professor Neuburger's new work on the "History of Medicine," of which one volume has appeared, is being translated and will be published from the Oxford University Press. He expects to have Volume II completed this year, and we hope to issue the English edition complete in one volume within the next fifteen months. I was greatly interested to see the new home of the *Wiener medizinische Gesellschaft*, built under the presidency of Billroth, which combines features of a library, a club and meeting place. The auditorium is exceptionally well arranged with seats for 300, and there is a large gallery. The library now numbers more than 40,000 volumes and is very rich in current periodicals. The university library is one of the largest in the city, and the arrangement in it for the accommodation of the medical students seems to be excellent. At the time of our visit the section of the reading room assigned to them was nearly full. A room has been set aside in connection with the medical faculty for the collection of all the literature relating to the history of the school, for the collection of the works of all the famous old men connected with it, and a repository for pictures and instruments, etc., the whole to form a collection illustrating the evolution of the history of the medical department of the university. This example could very well be followed in all of our medical schools. It has been done to some extent at the University of Pennsylvania, as William Pepper III. has already made large collections for this purpose.

The *Hofbibliothek* is unusually rich in manuscripts and early printed books. I was anxious to see the copy of "Christianismi Restitutio" of Michael Servetus, 1553, in which for the first time the lesser circulation is described. This is one of the only two known copies in existence. The entire edition was confiscated, and the author, at the time a practitioner in the little town of Vienne, near Lyons, fled for his life to Geneva. Here his heterodoxy was quite as obnoxious to Calvin, into whose hands he fell, and he was burnt at the stake in the same year. The "Restitutio" is one of the rare books of the world. Only two of the 1,000 copies known to have been printed have survived. The one in the *Bibliothèque Nationale* originally belonged to Dr. Mead, and the history is fully given in an appendix in Willis' work, "Servetus and Calvin." The Vienna copy is in excellent preservation, beautifully bound, and states on the title page that it came from the library of a Transylvanian gentleman living in London. It fell into the hands of Count de Izek, who presented it to the emperor of Austria. It is a thick, small octavo of about 700 pages. The first one to give credit to Servetus for his discovery of the lesser circulation was Wotton, whose "Reflections Upon Learning, Ancient and Modern," 1694, is a most interesting book, for an introduction to which I have long been grateful to my friend, Dr. Norman Moore. The other work that I was most anxious to see was the famous manuscript of Dioscorides, prepared at the end of the fifth century for Julia, daughter of the Emperor Flavius. It is one of the great treasures of the library. Now to us in the West only a name, Dioscorides, an army surgeon of the time of Nero, fills a great place in the history of medicine, and is still an oracle in the Orient. He was not only a great botanist, but he was one of the first scientific students of pharmacology. Scores of fine editions of his work, with commentaries, were issued in the fifteenth and sixteenth centuries. Two years ago this Vienna manuscript was reproduced in *fac simile* at Leyden. Though very expensive, the two volumes costing $150, it is a work which all the larger libraries should get, and it is just the sort of present librarians should make our wealthy consultants feel it a privilege to give.

THE HOSPITALS.

I was surprised to hear Professor Müller say that he thought in hospital architecture Vienna led the world, and that there was here a group of architects who were adepts in all matters relating to hospital construction. I have come to his conclusion, on what may appear to be very hastily acquired data. It is not often that in the same day and in the same institution one passes from eighteenth to twentieth century conditions. Dr. Koessler took us to the old medical clinic, now in charge of von Neusser, where I found the old wards very much the same as I remember them in 1874. Except in minor details, not only Oppolzer and Skoda, but probably also Peter Frank and de Haen could return to the *Allgemeines Krankenhaus* and not be surprised by any very unfamiliar sights. There is the same extraordinary wealth of clinical material. I must say it was a surprise to see the old type of nurse; not, of course, that she is necessarily either unintelligent or inattentive. Indeed, as we passed a bed in which there was a new patient whom the junior assistant had not seen, he turned to one of the nurses, who in reply to his question said, "Yes, Herr ——— says she has mitral stenosis and insufficiency!" I was interested to see in the ward a case of Pick's disease, the pericardial pseudocirrhosis of the liver. The old question comes up here as to priority of description. In the special number of the *Wiener klinische Wochenschrift*, issued for the congress, Professor von Neusser describes it as "Morbus Bamberger." He states that in 1872 Bamberger described the condition as a special malady which he had already known for a long time and which up to that time had not been recognized in the literature. Certainly Pick deserves credit for having brought together all the known facts relating to a clinical condition to which very little attention had been given before his paper. I had a most interesting talk with Pick and Brauer and Wenckebach on the whole question, which is not one simply of pericardial adhesion. Wenckebach has helped to solve the problem in a recent number of Volkman's *Vorträge*

in an article on the "Relation Between Respiration and Circulation." Brauer of Marburg, who is coming over to the session of the American Medical Association, will discuss the subject in connection with his operation of cardiolysis.

If anyone interested in hospitals—in every possible detail, construction, situation, general arrangements for the comfort of the patients, for the convenience of the students, for the advancement of science—if such an one wishes to have a Queen-of-Sheba sensation, let him visit the first group of the new buildings of the *Allegemeines Krankenhaus*. They have begun the rebuilding with the departments for women, and two of the three clinics, for midwifery and gynecology, are completed, one for Professor Schauta and the other for Professor Rosthorn, recently called from Heidelberg. About 10,000 deliveries a year take place in the three clinics, one of which is for midwives. The new clinics are exact duplicates of each other, and each has accommodation for about 200 patients. The buildings are of four stories, a central building with wings, built of brick and stucco, with spacious corridors, large windows, tiled floors and white oil-finished walls. Inside and out they form the most attractive hospital buildings that I have ever seen. But it is not so much this aspect that gives one that sinking of the heart of which the Queen of Sheba complained when Solomon showed his treasures—it is the organization and the completeness of the arrangements for teaching and for the scientific study of disease. One large floor is assigned to students, who all live in the building while attending the midwifery cases. Each clinic has its own laboratory, a special museum for teaching purposes, a library and a fully equipped small laboratory adjoining the gynecologic operating room, so that an opinion may be given immediately as to the nature of a growth. Down to the smallest detail every care has been taken to make these two clinics the most perfect of their kind, and if the hospital is completed on this elaborate plan it will, indeed, be worthy of the fame of the Vienna school and there will be nothing like it in Europe or America. The government foots the bills, and the total cost of the two buildings has been 9,000,000 kronen ($1,800,000).

Professor Schlesinger very kindly took us to the Franz Josef Hospital, also a new building, on a less elaborate scale but very complete in all its appointments. It is particularly well arranged for the acute infectious diseases, and the most elaborate precautions are taken to isolate and disinfect the patients. Professor Schlesinger is very popular with American students, and we found working in his wards Dr. George Cheyne Shattuck III. of Boston, and young Dr. Fischel of St. Louis, both of whom have for some months been acting as voluntary assistants. It was interesting to see two wards devoted entirely to erysipelas; as far as possible all the cases in the city are sent here. Connected with this hospital is a beautiful new children's department, built by Professor Schlesinger's father-in-law. It looked to be an admirable model for the new Harriet Lane Johnston's children's department at the Johns Hopkins Hospital. In the arrangement for isolating cases, in the simple and easily worked character of the wards, in the laboratory arrangements and in the special incubators for feeble babies the hospital seemed much in advance of anything I had ever seen.

The scientific laboratories of the medical school have been completely transformed. Dr. Fröhlich took us through Professor Meyer's Pharmacologic Institute and through the new physiologic laboratory and the anatomic department—such a contrast to the old days!

CRITICISM OF WORK OF CONGRESS.

The general impression one gets of the work of the congress is very favorable. Too much, perhaps, is attempted. There are too many papers, but the keenness of the men and the scientific interest are most stimulating. As I remarked about the congress two years ago in Munich, there is a strong tendency in internal medicine to-day toward physiologic and chemical problems. On the long list of papers, eighty-eight in number, there were only about five dealing with bacteriologic questions. An extraordinary number dealt with questions in physiologic pathology and presented the results of experimental work.

INFLUENCE OF VIENNA ON AMERICAN MEDICINE.

As a medical center Vienna has had a remarkable career and her influence, particularly on American medicine, has been very great. What was known as the first Vienna school in the eighteenth century was really a transference by van Swieten of the school of Boerhaave from Leyden. The new Vienna school, which we know, dates from Rokitansky and Skoda, who really made Vienna the successor of the great Paris school of the early days of the nineteenth century. But Vienna's influence on American medicine has not been so much through Skoda and Rokitansky as through the group of brilliant specialists—Hebra, Sigmund and Neumann in dermatology; Arlt and Jaeger in ophthalmology; Schnitzler and von Schrötter in laryngology; Gruber and Politzer in otology. These are the men who have been more than others responsible for the successful development of these specialties in the United States. Austria may well be proud of what Vienna's school has done for the world, and she still maintains a great reputation, though it can not be denied, I think, that the Æsculapian center has moved from the Danube to the Spree. But this is what has happened in all ages. Minerva Medica has never had her chief temples in any one country for more than a generation or two. For a long period at the Renaissance she dwelt in northern Italy, and from all parts of the world men flocked to Padua and to Bologna. Then for some reason of her own she went to Holland, where she set up her chief temple at Leyden with Boerhaave as her high priest. Uncertain for a time, she flitted here with Boerhaave's pupils, van Swieten and de Haen, and could she have come to terms about a temple, she doubtless would have stayed permanently in London, where she found in John Hunter a great high priest. In the first four decades of the nineteenth century she lived in France, where she built a glorious temple to which all flocked. Why she left Paris, who can say? but suddenly she appeared here, and Rokitansky and Skoda rebuilt for her the temple of the new Vienna school, but she did not stay long. She had never settled in northern Germany, for though she loves art and science she hates with a deadly hatred philosophy and all philosophical systems applied to her favorite study. Her stately Grecian shrines, her beautiful Alexandrian home, her noble Roman temples, were destroyed by philosophy. Not until she saw in Johannes Müller and in Rudolph Virchow true and loyal disciples did she move to Germany, where she stays in spite of the tempting offers from France, from Italy, from England and from Austria.

In an interview most graciously granted to me, as a votary of long standing, she expressed herself very well satisfied with her present home, where she has much honor and is everywhere appreciated. I boldly suggested that it was perhaps time to think of crossing the Atlantic and setting up her temple in the new world for a generation or two. I spoke of the many advantages, of the absence of tradition—here she visibly weakened, as she has suffered so much from this poison—the greater freedom, the enthusiasm, and then I spoke of missionary work. At these words she turned on me sharply and said: "That is not for me. We gods have but one motto—those that honor us we honor. Give me the temples, give me the priests, give me the true worship, the old Hippocratic service of the art and of the science of ministering to man, and I will come. By the eternal law under which we gods live I would have to come. I did not wish to leave Paris, where I was so happy and where I was served so faithfully by Bichat, by Laennec and by Louis"—and tears filled her eyes and her voice trembled with emotion—"but where the worshipers are the most devoted, not, mark you, where they are the most numerous; where the clouds of incense rise highest, there must my chief temple be, and to it from all quarters will the faithful flock. As it was in Greece, in Alexandria, in Rome, in northern Italy, in France, so it is now in Germany, and so it *may be* in the new world I long to see." Doubtless she will come, but not till the present crude organization of our medical clinics is changed, not until there is a fuller realization of internal medicine as a science as well as an art.

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THE CARE OF THE INSANE.

Elsewhere in this issue will be found a review of a remarkable book,[1] which is, to use the reviewer's words, "a graphic picture of treatment, not only tactless, but positively harsh and brutal," and of "a state of affairs . . . which, it must be admitted, is duplicated to a great extent in a large majority of our public institutions for the insane." The picture is calculated to stir the public mind to its depths, and in this it will do good, irrespective of any question that may arise in the minds of some as to the completeness of the *restitutio ad integrum* implied in the title.

It is easy to explain, and so to palliate, so far at least as individuals are concerned, the deplorable errors of method depicted in the book and undoubtedly existent in fact. But that only renders all the graver the inevitable impeachment of the system that makes possible the need of such explanation and palliation.

Back of the whole trouble lies the too common defect of parsimony — parsimony not only in withholding money, but in cheap political methods which make office "worth while" through the systematic use of patronage as a perquisite—in providing the wherewithal for all public measures dealing with the state's greatest economic asset, its funded health. Of this parsimony the public itself is the direct cause, inasmuch as it fails persistently to realize how infinitely precious economically is that asset, and consequently how imperative is the adequate supply of a personnel adapted to its care. With the medical profession rests the responsibility for instructing the community in what direction to look for an assured and increasing income from this capitalization of the public health, what measures are best adapted to insure such income, and what justification is to be expected in increased value of the asset to offset the initial outlay and the expense of upkeep.

And from this responsibility it has not shrunk. An intelligent conception of what is due to the mentally afflicted of all kinds—not only to those for whose hopeless condition humanity demands the sympathetic care of their more fortunate fellows, but still more to those who by proper and judicious measures may in time be restored to economic efficiency and personal happiness—has been for years well established in the minds of the medical profession, and especially of that section of it that has made, and is making, this problem its special care. If the final word rested with them, if appointments from highest to lowest were not, as they are in many states, the shuffling of a political pack of cards, those employed in attendance on the insane would long ago have been selected, not from among farm hands and factory workers, untrained in the most elementary principles underlying the work they assume, and usually lacking, both by nature and training, those traits of mind and character that are before all else essential to a proper discharge of the duties; but rather from persons of more than average intelligence and great resourcefulness, of refinement, and, above all, of the sympathy that such mental qualifications commonly call forth in the presence of sorrow and suffering. Natural fitness, enhanced by special training, of mind, body and disposition, and such fitness alone, must be the primary qualification for all, not only for the superintendent and medical staff, but for every attendant that comes, in even the humblest capacity, into personal relations with the mentally afflicted.

But to render available such a field for selection, the position of attendant on the insane must offer advantages of environment, of mode of life, and of remuneration, far different from those now obtaining, and, above all, it must be removed entirely from the blighting miasma of political influence. So long as conditions continue as at present, it can hardly be expected to draw into this honorable service the class of persons desired or, indeed, any others than such as now jump at it because they welcome any change from their present lot as necessarily an advancement for them. In the transition from the days of Sairey Gamp to the present we have an object lesson in the nursing service as to what a change of conditions can effect in the personality and character of those who engage in it. A similar change in the service of attendance on the mentally afflicted would assuredly bring about a like result. There lies the path to the banishment of such horrors as are depicted in "A Mind That Found Itself."

1. A Mind That Found Itself. By Clifford Whittingham Beers, See page 1546

HOME TREATMENT OF TUBERCULOSIS.

There is no doubt that the sanatorium treatment, with its opportunities for outdoor life, its temptations to eat heartily of suitable food, and the absolute regulation of habits of rest and sleep, is the ideal treatment for those afflicted with tuberculosis. But it will never be possible for the great majority of consumptives to secure it. Home treatment, therefore, is an extremely important factor for the reduction of the mortality from this disease, and is especially to be considered because of the ease with which people in early stages may be persuaded to submit themselves to it, while it is practically impossible to persuade the majority of people to go

away for treatment until the disease has advanced so far as to make its ultimate cure, or even permanent relief, very doubtful. Hence, the report of the Committee for the Prevention of Tuberculosis of the New York Charity Organization Society will prove of interest. This report[1] contains an account of twenty months' experience of a subcommittee.

The committee's main activities have been in five directions: the home treatment proper, the day camp, country treatment, sanatorium treatment, and a system of tuberculosis dispensaries. One hundred and twenty-seven patients were treated exclusively in their homes. Out of 35 incipient cases in only 11 did the disease progress, while in 23 cases, 66 per cent., the condition of the patient was materially improved at the end of the term. Of 80 cases originally diagnosed "moderately advanced," in less than one-half did the disease progress, while in 41 the patients were improved. Even out of 12 cases originally diagnosed as "far advanced" one patient improved and all were made more comfortable, and, above all, were put in circumstances and given instructions which made them less likely to be foci of contagion for others. The average cost per patient for accomplishing this has been less than $3.00 a week. This includes not only money used for the patient, but also that spent for the family.

One of the most important features of the work was the so-called "day camp." Various plans were considered, such as vacant lots in the suburbs, a part of Blackwell's Island, hospital roofs, boats and recreation piers. Finally, one of the old Staten Island ferry boats was placed at the disposal of the committee, free of charge, with the privilege of making minor alterations. It was supplied with steamer chairs and hammocks, and from every point of view—health, happiness, comfort and economy—the boat has been a success. Only one feature is disappointing. The attendance was regrettably small. The boat was opened as a camp about the middle of June, 1907, and closed at the end of October. Out of 242 patients who presented themselves at one time or another during the 141 days in which the camp was in operation only 87 attended for twenty days or more. The average daily attendance was less than 40 though there were accommodations for at last 100. It is evident that if this feature is to accomplish the good that it should, interest must be aroused in it by the proper instruction of tuberculosis patients, and the attention of physicians must be widely called to the opportunity thus provided.

As a result of the interest aroused by the work of this committee there has been established the "Association of Tuberculosis Clinics." Through the efforts of this committee all the hospitals under the New York Department of Health and the dispensaries of five other important hospitals in the city have united to organize for the care of tuberculous patients. Lack of cooperation in the past has prevented the success of dispensary treatment; patients wandered from one dispensary to another and thus could not be kept under observation.

The other two features of the work that are discussed in the report, the sanatorium treatment and treatment in the country, do not belong properly to this subject, yet they serve to show how much of good can be accomplished. Of 47 patients treated in sanatoria 39, or 83 per cent., improved; 48 patients were given from one to five months in the country. Seventy-five per cent. of those who were sent to the country returned improved and all "returned to their families realizing the value of fresh air, of quiet rest and food, knowing how to protect their families against infection and determined to do their part in the long struggle toward health." The report states that the average cost of treating a patient in a sanatorium was less than $3.50 a week; at the same time it was necessary to allow an average of $2.69 a week to afford relief in the home because of the absence of the bread winner. In the country the average weekly cost for each patient was about $6.50.

1. Home Treatment of Tuberculosis in New York City, Charity Organization Society, March, 1908.

THE THERMAL DEATH POINTS OF PATHOGENIC BACTERIA SUSPENDED IN MILK.

This complex and difficult problem has been reinvestigated recently by Rosenau[1] in the Hygienic Laboratory at Washington. In this work special attention has been given to the thermal death point of the tubercle bacillus which presents peculiar difficulties in the way of accurate results because it does not grow readily on artificial media. Animals must be inoculated in order to determine whether or not the bacillus is alive and pathogenic, and here again special difficulties arise because dead bacilli retain the power to produce tubercles and other lesions. Dead bacilli, however, are not infective, and in doubtful instances, e. g., when the lesions in the primarily inoculated guinea-pigs are very extensive or unusual, secondary inoculation becomes necessary to determine whether or not the bacilli are alive or dead. Even tuberculin can not differentiate between living and dead tubercle bacilli introduced into the bodies of guinea-pigs and there causing lesions.

In Rosenau's careful experiments young cultures of tubercle bacilli of the bovine type were rubbed up with milk until uniform suspensions were secured; test-tubes containing from 10 to 15 c.c. of this milk were kept immersed for the required time in a water bath at the proper temperature and in such a way that the level of the milk was below the level of the water. Further details need not be given here. Suffice it to say that Rosenau's results tally well with those previously obtained by the most careful investigators in this field, of whom may be mentioned Theobald Smith, Schroeder, and Russell and Hastings in this country: "Nine series

1. Bull. No. 42, Hyg. Lab., U .S. Public Health and Marine Hospital Service, Washington, D. C., 1908.

of tests on guinea-pigs with five cultures plainly show that in milk the tubercle bacillus loses its virulence and infective power when heated to 60 C. for twenty minutes." When heated to 65 C. a much shorter time is necessary. In these experiments the milk was very heavily loaded with bacilli—the control animals died promptly—and it is not likely that milk ever contains so many bacilli under natural conditions. For this reason it is believed that market milk after this kind of treatment, which is practicable even on a large scale, would be safe for human consumption. This is the most important deduction from the practical point of view from the results of Rosenau's experiments, so far as tubercle bacilli are concerned.

As regards other bacteria, it was found that the typhoid bacillus when grown in milk is killed by heating such milk for two minutes at 60 C.; the diphtheria bacillus and the cholera vibrio were usually destroyed by the time the temperature of the milk reached 55 C., only occasional germs surviving until 60 was reached; the dysentery bacillus, somewhat more resistant than the typhoid bacillus, was killed always after heating at 60 for ten minutes. Hence milk heated to 60 C. and maintained at that temperature for twenty minutes probably no longer conveys infection with the bacteria mentioned, if guarded from subsequent contamination. In all probability the cause of scarlet fever, as well as streptococci, staphylococci and most of the bacteria commonly associated with infantile diarrheal diseases, are also destroyed on heating milk containing them to 60 C. for twenty minutes. Practicable means for securing harmless market milk consequently are within relatively easy reach—always bearing in mind, however, that pasteurization of milk, no matter how effective, does not prevent subsequent contamination.

THE ROENTGEN RAY NOT AN UNMIXED BLESSING TO THE SURGEON.

Notwithstanding the great services rendered, and the no doubt greater services still to be rendered, to medicine by the Roentgen ray, it is by no means an unmixed blessing. Apart from the damage to health sometimes sustained by operators as well as by patients, and from the actions at law arising therefrom, it is likely to become a serious menace to the surgeon more particularly in the case of fractures. The noted English case of Southern vs. Lynn Thomas and Skryme, in which the defendants were penalized altogether for damages and expenses to the extent of over $20,000, is an example of a peril to which any surgeon or general practitioner may at any time be subjected. The case was tried first in November, 1906, and, the jury disagreeing, a second trial was held, at which the above-mentioned judgment was given.

The facts were that the patient had sustained a subglenoid dislocation of the humerus, with a fracture of the surgical neck and much bruising and edema of the soft parts. The dislocation was reduced, but it was found impossible to bring the ends of the humerus into apposition, for the upper fragment remained rotated with the articular surface inward and the fractured end outward. The great swelling, moreover, prevented any immobilizing measures. Numerous surgeons of the highest reputation in Great Britain testified at the trial that—failing the possibility of bringing the fractured surfaces into end-to-end apposition—the next best thing was done, viz., the shaft and head were brought into lateral apposition and union was obtained, though, of course, with limitation of function.

The raising of a subscription to meet the expenses of Mr. Thomas and Dr. Skryme affords an opportunity to Dr. Lucas-Championnière to comment[1] on the increasing danger to practitioners of charges of malpractice in fracture cases, resulting from the introduction of the *x*-ray. The public, he points out, has always considered itself capable of deciding questions regarding fractures, and this dangerous result of a little knowledge has been greatly increased by the seeming simplicity of the radiograph. Dr. Lucas-Championnière insists on the necessity of impressing on the public the fact that even the best *x*-ray pictures can be properly interpreted only by a skilled man, and that the public, so far from having its supposed "common sense" knowledge of all about fractures rendered infallible by the *x*-ray is more than ever liable to be led astray.

Altogether the most dangerous element in this case, however, is the theory that was advanced by the lawyers for the complainant, apparently favored by the judge and adopted by the jury, that the line of treatment used was not justifiable because it could not cite authority in well-known text-books in use in Great Britain. Should such an absurd view be widely accepted as a legal precedent, it would sound the knell of all advance in modern surgery and bind all medicine once more with the medieval shackles of "authority." It would seem only in accordance with the much worshipped "common sense" that the insistent advocates of slavish adhesion to the typical methods of the text-books should also insist on Nature "playing the game," too, by providing only typical fractures to be dealt with.

CONGESTION AND CONCENTRATION.

Dr. Devine[2] has pointed out the important distinction that while congestion of population in large cities is an unqualified evil, a concentrated population is by no means necessarily so. In some ways concentration, under the imperative conditions of our seething modern civilization, is even beneficial. In some localities sanitary science has been so well applied that many people may now enjoy health within an area in which, a decade

1. British Medical Journal, March 28, 1898, abstracted in THE JOURNAL, April 25, 1908, page 1381.
2. Charities and the Commons, March 21, 1908.

ago, the conditions would have been deadly for a few inhabitants; for, on the one hand, tenement house laws have compelled landlords to make the homes of their tenants sanitary, and, on the other, landlords have had the speculative wisdom to do this of themselves. The plumbing and ventilation of houses are much better than they were a decade ago. The authorities have provided purer water. Streets are adequately sewered. A concentrated population is, therefore, not necessarily an unhealthy one, while concentration secures certain economic advantages.

There seem to be inexorable reasons for the ever-increasing gathering of people in cities. There is the clannishness of immigrants which prevents their separation and dissemination throughout the country. The often meretricious glamour of urban life, which induces men and women to forego living in healthful rural districts, was, to be sure, a much stronger magnet a score of years ago than to-day, when the rural free delivery, the trolley, the 10-cent magazine, the mail-order method of selling goods, the moving picture, the various musical appliances, and many other diverting factors have turned almost every rural into a really suburban district. The inevitable and most powerful factor in the production of congestion, however, is the fact that men whose working hours are greatly prolonged must, or at any rate will, live near their work. In the very instructive exhibit on congestion of population recently held in New York City there was a diagram showing, in the case of three important trades in Manhattan, the percentage of workmen who live in that borough. Of those who work 10 hours a day on food products, 74 per cent. have their homes in Manhattan. Of shoemakers, who work 9.3 hours in the day, 42 per cent. live in Manhattan; while but 31 per cent of printers, who work but 8 hours a day, live on that island. Certain civic conditions peculiar to given municipalities, moreover, favor congestion. The conformation of Manhattan Island, for example, is such that the problem of transporting to and from business those who would make their homes in the suburbs is one of constantly increasing difficulty. A dozen subways, added to the single one now in existence, besides the various bridges and tunnels now used or being constructed, with all the trolley and elevated cars in commission, are not expected to give adequate service.

A solution of the problem has been proposed in the building, in congested districts, of tenements twice as high as those which exist at present, of which the average height is six stories. High buildings, up to this time, have solved the problem of commercial congestion; and by analogy it is held that they might also solve the problem of congested homes. The idea seems so specious and alluring that the objections to it which experience would interpose must be stated. Commercial skyscrapers are usually isolated; should they in the course of time become so numerous as to form lofty, continuous canyon walls the resulting exclusion of light, sunshine and pure air would make the lower stories uninhabitable. Even now the attendant evils, such as dark or poorly-lighted rooms, where artificial light must constantly be used, however bright the days may be, afford sufficient evidence that only a limited number of such structures are practicable for use. And these objections would be still more potent in the case of tenements, which must be occupied night and day and used for all the purposes of domestic life. The exclusion of light, pure air and sunshine from living apartments, especially in buildings facing on narrow streets, would mean the prevalence of disease among the tenants, increasing progressively with the age of the buildings. Tuberculosis especially, which even under present conditions is decreasing to so gratifying a degree, would regain its lost vantage.

There are in the congested parts of most great cities large areas taken up with insanitary structures, and some non-producing property held for speculation; here the capacity of the land for the wholesome accommodation of tenants has by no means reached its limit. In Chicago, as in Boston, New York, Philadelphia and other cities, model tenements have been built, and there are still extensive tracts ready for such structures. The humane capitalist can find no more sensible or grateful outlet for investment. "Philanthropy with 4 per cent." is an attractive and a most reasonable motto. The New York City and Suburban Homes Company has now for dividend disbursements 4.5 per cent. a year.[1] Its investments have reached $5,500,000. Its losses during the last five years from unpaid rents and bad debts were in the "wholly insignificant proportion of fourteen one-hundredths of 1 per cent." London has more than $100,000,000 invested in model tenements. The market value of such investments is relatively stable, while fluctuations in railway and other stocks and bonds are facts "that some of us are too sensitive to talk about." In the certainty of reasonable profits from investments in sanitary urban homes lies the most hopeful element in the problem of population congestion. Nor is the proposition one which millionaires alone could handle; even physicians might cope with it.

BODY TEMPERATURE AND PERIODICITY.

The well-known rhythmical variation in the body temperature, which finds its minimum in the early morning hours and its maximum toward evening, usually persists unchanged, even though the individual sleeps during the day and works at night or if he remains in bed for the twenty-four hours. A curious characteristic of this periodicity has been noted by W. A. Osborne,[2] who made notes of the variations in his temperature during a voyage from Melbourne to London. He had previ-

1. Gould, E. R. L.: The Way Out, Charities and the Commons. April 4, 1908.
2. Jour. of Phys. xxxvi, No. 6.

ously determined that his own daily maximum occurred at about 6 p. m., and as the local time changed with the increasing distance from Melbourne it was found that the time of his maximum was determined by the local time rather than by Melbourne time. Thus it appears that the body is able to adjust itself in this respect to gradual changes in the time of the daily variations of atmospheric conditions, such as light, heat and pressure, and of physiologic activity.

PROMOTING NOSTRUMS AMONG MEDICAL STUDENTS.

It is not only the "Heathen Chinee" who is peculiar for "ways that are dark." The paths of the evildoer are many and devious. We learn that in at least one university medical school, and probably, therefore, in many more, all the students are being bombarded with "literature" and samples of one of the most discredited nostrums. This is, of course, not to be wondered at, and it is a far-seeing scheme to endeavor to breed up among undergraduates a race of future physicians to whom the name of this one time "ethical proprietary" shall be, verbally and in fact, familiar in their mouths as household words. Fortunately, the means of meeting such a flank attack are as obvious as the duty of doing so. If the professors of therapeutics in these schools are as earnest in the fulfilment of the obligations of their chairs as we believe them to be they will devote one or more lectures to the subject of nostrums, categorically laying down the objections, scientific, economic and ethical, to their encouragement by physicians. Attention can be especially directed to those particular nostrums that are adopting the above mentioned method of diverting the allegiance of the students from science to quackery. Thus it will not be difficult to convert "ways that are dark" into "tricks that are vain."

Medical News

ALABAMA.

Cabot in Birmingham.—Dr. Richard C. Cabot, Boston, was the guest of the Jefferson County Medical Society, Birmingham, April 17, when he delivered an address on "Essentials and Non-essentials of Physical Diagnosis." He also gave a clinic at St. Vincent's Hospital.

Tuberculosis Exhibit.—The Tuberculosis Exhibit of the American Society for the Prevention of Tuberculosis was opened in Montgomery, April 23, Dr. Samuel W. Welch, Talladega, president of the Medical Association of the State of Alabama, presiding. The opening program of the exhibit was a symposium on tuberculosis, participated in by many practitioners in attendance at the annual meeting of the association.

Personal.—Drs. Glenn Andrews, Montgomery, Benjamin L. Wyman, Birmingham, George T. McWhorter, Riverton, T. H. Marbury, Birmingham, and Hon. H. E. Reese, Selma, have been appointed members of the board of trustees of the State Sanitarium of Tuberculosis.——Dr. J. E. Garrison, Birmingham, is said to have shot and killed J. D. Williams, an electrician, in a duel at Flat Creek, April 30. Dr. Garrison was seriously wounded.

State Society Meeting.—The sixty-first annual meeting of the Medical Association of the State of Alabama was held in Montgomery April 21 to 24. The following officers were elected: Dr. Benjamin L. Wyman, Birmingham, president; Dr. Robert J. Redden, Vernon, vice-president for the northern district; Dr. James N. Baker, Montgomery, secretary; Dr. Henry G. Perry, Greensboro, treasurer; Drs. Glenn Andrews, Montgomery and Gay, censors; Drs. William D. Partlow and Stuart, orator and alternate orator, respectively, and Drs. Joseph B. Letcher, Shorter, M. L. Mallory, J. P. Stuart, William S. McElrath and William A. Burns, Shelfield, councilors. By reason of the absence of Dr. Edward L. Marechal, Mobile, on account of ill health, the Jerome Cochran lecture was not delivered.

Medical Society Meetings.—At the annual meeting of Autauga County Medical Society, held recently at Prattville, the following officers were elected: President, Dr. John E. Wilkinson, Sr.; vice-president, Dr. John W. Hagler; secretary-treasurer, Dr. John E. Wilkinson, Jr.; health officer, Dr. Robert M. Davis, all of Prattville, and delegates to the state association, Drs. Elbert H. Downs, Billingsley and Dankersly.——At the meeting of the Walker County Medical Society, held in Jasper March 13, the following officers were elected: Dr. John M. Miller, Cordova, president; Dr. J. L. Sowell, Jasper, vice-president; Dr. John M. Miller, censor, and Dr. Andrew M. Stovall, Jasper, county health officer.——The Bessemer Medical Society was organized April 9 with a membership of 15, and the following officers were elected: President, Dr. Thomas C. Donald; vice-president, Dr. Edward P. Lacy; secretary, Dr. Thomas J. Conwell, and treasurer, Dr. E. V. Colwell.——Shelby County Medical Society, at its annual meeting, held at Montevallo, April 4, elected the following officers to fill unexpired terms; Dr. John R. Pow, Maylene, vice-president; Dr. Joseph R. Morgan, Shelby Springs, censor; Dr. V. H. Williams, Calera, secretary, and Drs. Orlando E. Black, Wilsonville, and Charles T. Acker, Columbiana, delegates to the state association.——At the annual meeting of the Lee County Medical Society, held at Opelika, April 14, the following officers were elected: President, Dr. Homer S. Bruce, Opelika; vice-president, Dr. William J. Love, Opelika; secretary-treasurer, Dr. Cecil S. Yarbrough, Auburn; health officer, Dr. Andrew H. Read, Opelika, and the president and secretary-treasurer delegates to the State Association.

ARKANSAS.

Sanitarium Opened.—The Florence Sanitarium, Pine Bluff, has been formally opened to receive patients. The institution is in charge of Dr. Arthur C. Jordan, assisted by Dr. John S. Jenkins.

Smallpox.—Smallpox has developed in the negro settlement between Branch and Charleston.——Dr. A. Earl Hardin, state health officer of Fort Smith, is having great difficulty in maintaining quarantine in the negro families in which smallpox has been discovered. Guards have allowed patients to go to restaurants, and in many ways have allowed disregard of quarantine.

Correspondence Course in Military Medicine.—Dr. R. L. Russell, Little Rock, head of the medical department of the Arkansas National Guard, is now engaged in planning a course of lectures to be studied by all of the men in his department. His plan is to mail the lectures at regular intervals to each man, who must study them and be examined on them later. His intention is to make his men thoroughly acquainted with all work of the medical department of the guard.

Society Meetings.—The annual meeting of the Crawford County Medical Society was held in Van Buren, April 24, at which the following officers were elected: President, Dr. Thomas F. Wood, Uniontown; vice-president, Dr. Matt S. Dibrell, Van Buren; secretary, Dr. C. J. Campbell, Mulberry; treasurer, Dr. James E. Blakemore, Van Buren; censors, Drs. Othello M. Bourland, Van Buren, Giles Lucas, Van Buren, and James C. Sharp, Alma; and delegate to the state society, Dr. Othello M. Bourland, Van Buren.——At the last meeting of the Independence County Medical Society, held at Batesville, Dr. Charles G. Hinkle, Batesville, was elected president; Dr. James H. Kennerly, Batesville, vice-president; Dr. William B. Lawrence, Batesville, secretary; Dr. Robert H. Hodges, Sulphur Rock, treasurer; Dr. Franklin A. Gray, Cave City, delegate to the state society, and Dr. William B. Lawrence, Batesville, alternate.

DELAWARE.

Jury Decides for Physician.—In the case of Dr. Jacob C. Knowles, Seaford, who sued Edwin Massey for $250 for attendance on a smallpox case, the jury on April 15 rendered a verdict in favor of Dr. Knowles.

New Castle County Society Active.—At the meeting of New Castle County Medical Society, held in Wilmington, April 17, Dr. Howard A. Kelly, Baltimore, gave an address on "The Relation of Art to Medicine and Surgery." The address was followed by an informal reception and collation.——The interest

in the postgraduate class is well sustained. Diseases of the lungs are being considered during the sessions of April and May.

Personal.—Dr. Dudley L. Munson, Wilmington, has moved to Seattle, Wash., where he will resume practice.——Dr. Henry W. Briggs, Wilmington, has been re-elected physician of New Castle County.

Hospital Election.—At the annual meeting of the board of trustees of the Delaware Hospital, Wilmington, the following staff was elected: Surgeons—Drs. John Palmer, Jr., James A. Draper, Joseph P. Wales and Harold L. Springer; physicians—Drs. William Bullock (emeritus), John P. Wales, Willard Springer, William C. Pierce and Joseph W. Bastian; gynecologist—Dr. Henry J. Stubbs; associate gynecologist—Dr. Samuel C. Rumford; pathologists, Drs. Albert Robin and W. H. Kraemer; skiographer, Dr. Samuel C. Rumford; and eye, ear, nose and throat, Drs. Joshua A. Ellegood and Read J. McKay.

Hypnotic Healer Convicted.—"Prof." G. Herman Lawson, known as a "hypnotic healer," was convicted of practicing medicine without a license at Wilmington and was sentenced to one year's imprisonment and to pay a fine of $100. This is the first conviction secured under the new medical practice act of Delaware. Much credit for the conviction is due to Mr. Daniel O. Hastings, the deputy attorney-general for the state, for the vigor with which he prosecuted the case. It is intimated that an appeal may be made to the board of pardons in behalf of Lawson, on account of the condition of his health, but it is generally believed that no interference with the execution of the sentence will follow.

Medical Societies Meet.—At the second annual meeting of the Delaware Antituberculosis Society, held in Wilmington, April 14, Vice-president Dr. Harold L. Springer, in the chair, the following physicians were elected directors of the association: Drs. Irvine M. Flinn, Peter W. Tomlinson, Joseph P. Wales, Harold L. Springer and Albert Robin, all of Wilmington.——Sussex County Medical Society at its annual meeting, held in Georgetown, elected the following officers: President, Dr. William P. Orr, Lewes; vice-president, Dr. Robert B. Hopkins, Milton, and secretary, Dr. Joseph K. Frame, Millsboro. ——The physicians of Milford have organized a medical association and have elected Dr. John S. Prettyman president; Dr. George W. Marshall, vice-president, and Dr. Edith Phelps, secretary.

ILLINOIS.

Communicable Diseases.—Five cases of smallpox are reported in one family in Elgin.——Five families in La Harpe have been placed under quarantine on account of scarlet fever.

Certificate Revoked.—The State Board of Health, at a special meeting held in Chicago, April 25, revoked the certificate of Dr. Jabez Clifford Casto, late of Decatur, on account of unprofessional conduct in connection with the publication of fraudulent testimonials in the daily newspapers of Decatur.

Personal.—Dr. Charles K. Unkrich, Monmouth, has recovered from his recent attack of appendicitis.——Drs. Frank Billings, Chicago; Vaclav H. Podstata, Elgin; J. L. Greene, Hospital; Gillette, Jacksonville; William L. Athon, Anna and George A. Zeller, South Bartonville, have been appointed delegates to represent Illinois in the National Conference of Charities and Corrections, to be held in Richmond, Va., May 6-13.

Practical Examination of Physicians.—At a special meeting of the State Board of Health, held April 25, the board, by a formal resolution, approved of the proposition to subject all physician applicants for a state license, to a practical examination covering one day, in addition to the written examination, which requires three days for completion. Owing to press of work the details were not arranged, but it is probable that the plan will be put in operation with the October (1908) examination.

Society Meetings.—The thirty-fourth annual meeting of the Central Illinois District Medical Society was held April 28 at Pana, under the presidency of Dr. Frank P. Auld, Shelbyville. The following officers were elected: President, Dr. Frank P. Auld, Shelbyville (re-elected); vice-president, Dr. Don W. Deal, Springfield; second vice-president and treasurer, Dr. John N. Nelms, Taylorville; secretary, Dr. Roscoe C. Danford, Pana (re-elected); and censors, Drs. Jacob Huber, Pana, William J. Eddy, Shelbyville, Darwin D. Barr, Taylorville, Ben B. Griffith, Springfield, and Frederick J. Eberspacher, Pana.——At the April meeting of the Tazewell County Medical Society the following officers were elected:: President, Dr. Carl G. Muelhmann, Pekin; vice-president, Dr. Harry V. Bailey, Pekin, and secretary-treasurer, Dr. Edgar E. Kilby, Mackinaw.

Chicago.

Personal.—Dr. Edward A. Fischkin has been elected president of the Jewish Civic League.——Dr. Thomas J. Robeson is seriously ill at his home with pneumonia.

Illegal Practitioner Fined.—Dr. R. Scoda, charged with practicing medicine without a license, is said to have been found guilty and fined $20 April 30, in Judge Scovel's court.

Fined for Assault.—Dr. Willis C. Stone is said to have been fined $25 and costs April 28 by Municipal Judge Maxwell for striking a boy, who persisted in building a bonfire near the physician's home.

Ambulance Surgeons in Uniform.—The 16 police ambulance surgeons on April 25 donned the new uniform prescribed by the health commissioner.

Mortality of the Month.—With one exception, the mortality for April, equivalent to 14.24 per 1,000 per annum, was the lowest for the month in ten years. It was 24 per cent. lower than the average for 30 years, 12 per cent. lower than the 10-year average, and 17 per cent. lower than for the preceding year. The greatest reductions compared with last year were in pneumonia with 136 fewer deaths; acute contagious diseases, 107 fewer; nervous diseases with 81 fewer; nephritis with 59 fewer; heart diseases, with 52 fewer; accidents (including violence), with 29 fewer; cerebrospinal meningitis, with 20 fewer; cancer, with 17 fewer; diarrheal diseases, with 14 fewer; consumption, with 13 fewer; and typhoid fever, with 5 fewer.

Good Health and Low Death Rate.—The health of the city for the week ended May 2, was phenomenally good, the death rate, equivalent to an annual mortality of 12.90 per 1,000, being the lowest record for any week for the last six months, and nearly 32 per cent. lower than that of the corresponding week of 1907. The deaths reported were 536, 87 fewer than for the preceding week, and 208 fewer than for the corresponding week of 1907. All the important diseases except heart disease, cancer and bronchitis show a lower mortality than for the preceding week, and for the first time in a year no death from typhoid fever was reported. Pneumonia caused 68 deaths; consumption, 67; heart diseases, 54; violence (including suicide), 40; acute intestinal diseases, 32; cancer, 29; nephritis, 28; bronchitis, 22, and nervous diseases, 20. There were 10 deaths reported from diphtheria, 4 from scarlet fever, 3 from influenza, 2 from measles and one death from whooping cough.

INDIANA.

Hospital Notes.—The Methodist Hospital at Sixteenth Street and Capitol Avenue, Indianapolis, was formally dedicated April 29.——Ground was broken for the Union Hospital, Terre Haute, April 22. The new building is expected to cost $35,000.

Personal.—Dr. Frank Randolph, wife and son, Elkhart, sailed for England April 21.——Dr. Robert J. Clark, Monticello, is reported to be seriously ill at a hospital in Indianapolis.——Dr. Malachi R. Combs, Terre Haute, is convalescent after a severe attack of pneumonia.——A petition has been circulated in Logansport, asking trustees of the Northern Indiana Hospital for the Insane, Longcliff, to appoint Dr. Clarke Rogers, son of the late superintendent, as medical superintendent of the institution.

District Society Meetings.—At the annual meeting of the Twelfth Councilor District Medical Society, held in Fort Wayne, April 21, the following officers were elected: President, Dr. Alpheus P. Buchman, Fort Wayne; vice-presidents, Drs. Joseph L. Gilbert, Kendallville, and Henry F. Costello, Decatur; secretary, Dr. Edmund M. Van Buskirk, Fort Wayne, and treasurer, Dr. David C. Wybourn, Sheldon. The resolutions introduced by Dr. Henry O. Bruggeman, Fort Wayne, following an address by Dr. John N. Hurty, Indianapolis, secretary of the State Board of Health, regarding medical inspection of school children, were adopted unanimously.——At the annual meeting of the Eighth Councilor District Medical Society, held April 17 in Anderson, Dr. Granville Reynard, Union City, was elected president; Dr. Manford M. Clapper, Hartford City, vice-president, and Dr. Maynard A. Austin, Anderson, secretary-treasurer (re-elected).——At the annual meeting of Jefferson County Medical Society the following officers were elected: President, Dr. Charles E. Hansel; vice-president, Dr. Walter M. Peck; secretary, Dr. Charles S. Bosenbury, and treasurer, Dr. J. Willis Hill, all of South Bend.

MARYLAND.

Measles Epidemic.—The Bulletin of the State Board of Health shows that during March a severe epidemic of measles prevailed throughout the state, where 715 cases were

reported, with 3 deaths.——On April 30 measles was reported epidemic in Allegany County.

Baltimore.

In Europe.—Dr. Lewis J. Rosenthal is in Paris.——Dr. Claribel Cone sailed for Naples, May 2.

Charged with Illegal Practice.—The charge of practicing medicine without a license, in the case of E. Frederick Morris, was withdrawn on his promise to leave the state.

Infirmary Condemned.—The Union Protestant Infirmary and the Home for Nurses adjoining has been been condemned by the inspector of buildings on account of lack of fire escapes, adequate stairways and exits. There are 90 patients and 40 nurses in the institution.

Pure Milk Ordinance.—The pure milk ordinance has passed both branches of the city council and will take effect June 1. It places control of the milk supply under the city health department, from which permits to sell milk must be obtained, the permits to be revocable for cause. Skim milk, buttermilk and milk modified under physicians' prescriptions may be sold as such. The health department is given supervision and inspection of stables and dairies of milk sellers, within and without the city.

Babies' Milk Fund.—In an appeal for support, the Babies' Milk Fund Association reports that 942 infants received milk at the stations of the association during the year, the largest daily number, 350, in August. Through the winter the average exceeded 180. In the twelve months, 51,610 days' feeding of modified milk was distributed, representing about 365,000 separate bottles, and in addition 12,440 quarts of whole milk. The milk is pasteurized during warm weather. The total mortality among infants using the milk was less than 10 per cent., or one-half the general death rate among city infants. The association has seven stations, and, in addition, during the summer has one in Patterson Park. During the summer seven nurses were employed, and afterward four. No milk was dispensed without a physician's order. A charge of 10 cents per day was made, but no milk was withheld in cases where the parents were unable to pay. The total expense for the year was $8,621.13.

Hospital Reports.—The report of St. Joseph's Hospital for 1907 shows the receipts and expenses to be about $51,500. The total admissions were 2,693; of these, 1,119 patients were able to pay a part, or in part, or entirely. The males outnumber the females by more than two to one. There are 2,456 reported cured; 494, improved; 104, unimproved, and 188, or 6.98 per cent. died.——The Presbyterian Eye, Ear and Throat Charity Hospital treated 11,658 patients in 1907, 10,808 of whom were white and 850 colored; of the entire number 30 per cent. were Hebrews. Dr. Francis M. Chisholm resigned from the staff after a service of more than 17 years. During the year 6,216 eye cases were treated, 2,389 ear cases and 3,053 throat cases; 36,236 visits were paid, and 823 patients were received in the hospital. The receipts for the year amounted to $11,222, and the expenses $10,491, and the invested funds now amount to $57,000.——The Baltimore Eye, Ear and Throat Charity Hospital reports for the year 1907 that 6,000 patients were treated; 1,754 operations were performed, 437 of which were on the eye, 238 on the ear and 1,079 on the throat. Of the patients treated 5,814 were charity patients. The white patients numbered about 66 per cent. of the total. The receipts for the year were $11,837 and the expenditures $11,668.——During 1907 St. Joseph's German Hospital treated 2,963, 1,119 of whom were pay patients in whole or in part. A new building has just been completed for emergency and isolation cases.

MASSACHUSETTS.

Hospital Notes.—By the will of the late Charles H. Newhall, Lynn, a bequest of $50,000 is left to the Lynn Hospital in memory of the parents of the deceased.——Founders Memorial, a modern hospital building thoroughly equipped, was presented to the Newton Hospital Corporation, recently, on behalf of Mellen Bray. Owing to the illness of the donor, the presentation was made by his son. The building is three stories high, of red brick with marble trimmings, and is connected with the main hospital building by an overhead walk and a tunnel.

Personal.—Dr. George H. M. Rowe, superintendent of the Boston City Hospital for 29 years, has been granted an indefinite leave of absence to recuperate from a general breakdown, due to overwork. Dr. John H. McCollom, for several years head of the contagious disease department, will act as superintendent during Dr. Rowe's vacation.——Dr. William H. Davis, Dorchester, Boston, medical inspector of the health department, has been made provisional sanitary inspector.——Dr. E. Peabody Gerry, Boston, has been appointed by the mayor special agent to investigate sanitary conditions in the handling of milk in West Roxbury and Jamaica Plain.——Dr. Charles E. Donlan, Dorchester, Boston, formerly superintendent of the Lowell City Hospital and almshouse, on April 23, was elected superintendent of the Long Island Almshouse and Hospital.

Medical Society Elections.—At the annual meeting and dinner of the Boston Society of Examining Physicians and Surgeons, the following officers were elected: President, Francis D. Donoghue; vice-presidents, Drs. Frank E. Allard, Edward M. Greene and Timothy Leary; secretary, Charles T. Cutting, and treasurer, Dr. Charles O. Kepler.——The Chicopee Medical and Surgical Club, on April 2, completed its organization, adopting a constitution and by-laws and electing the following officers: President, Dr. Francis F. Parker; vice-president, Dr. Locero J. Gibbs; secretary, Dr. Arthur F. Warren, and treasurer, Dr. W. S. O'Brien.——At the annual meeting and dinner of the Boston Medical Society, held April 7, the following officers were elected: President, Dr. William F. Gay; vice-president, Dr. Abraham J. Hurwitz; financial secretary, Dr. Frederick J. Bailey; corresponding secretary, Dr. L. A. Herman; treasurer, Dr. Rufus K. Noyes; and directors, Drs. Israel J. E. Shapira, John Dixwell, Nathan M. Goodman and J. Lockhart.——At the annual meeting of the Brockton Medical Society, held April 9, the following officers were elected: President, Dr. John P. Shaw; vice-president, Dr. Wieber P. Safford; secretary, Dr. R. A. Elliott; treasurer, Dr. Edward E. Goodwin, and executive committee, Drs. Jacob M. Morin, Joseph H. Lawrence and Thomas H. McCarthy.

MICHIGAN.

Society Meetings.—At the annual meeting of the Ontonagon County Medical Society, held at Houghton, recently, the following officers were elected: President, John S. Nitterauer, Ontonagon; vice-president, Dr. Edwin J. Evans, Rockland; secretary, Dr. E. W. Knowles, and treasurer, Dr. William B. Hanna, Mars.——On March 27, fifteen physicians of Adrian met and organized the Adrian Medical Society, with the following officers: President, Dr. George B. M. Seagar; vice-president, Dr. William E. Jewett, Sr.; secretary, Dr. Mart Hammond, and treasurer, Dr. Charles H. Lards.——The following medical men are officers of the Michigan Association for the Study and Prevention of Tuberculosis: President, Dr. Charles G. Jennings, Detroit; second vice-president, Dr. Edward T. Abrams Dollar, Bay; secretary, Dr. Alfred S. Warthin, Ann Arbor; treasurer, Dr. Henry J. Hartz, Detroit, and members of the executive committee, Drs. Victor C. Vaughan, Ann Arbor, Frank W. Shumway, Lansing, and Guy L. Kiefer, Detroit.

MISSISSIPPI.

Society Meetings.—At the semi-annual meeting of the Six Counties Medical Association, held in Clarksdale, March 25, Frederick M. Belen andcj;?t;andBronghershrdlushrdlushrdlu the following officers were elected: President, Dr. John G. Backstrom, Tutwiler; vice-presidents, Drs. S. Wade Glass, Dublin, Coahoma County, Leonard L. Bankstrom, Tunica, Tunica County, J. S. Sanders, Tallahatchie County, Albert P. Alexander, Sledge, Quitman County, and T. J. Allen, Bolivar County; delegates to the state association, Drs. Thomas M. Dye. Sherard, and Luther D. Harrison, Clarksdale, alternate, Coahoma County; Drs. Daniel W. Coker, Tunica, and Lancelot M. Minor, Hollywood, alternate, Tunica County; Drs. I. S. Sanders, Coffeeville, and George D. Hightower, Webb, alternate, Tallahatchie County; Drs. Smith, Robison, alternate, Sunflower County; Drs. Frederick M. Belen and John U Brongher and Abernethy Marks, alternate, Quitman County; and Dr. W. F. Ashley Shaw, and Allen, alternate, Bolivar County; secretary, Dr. James W. Gray, Clarksdale, and treasurer, Dr. Luther D. Harrison, Clarksdale.——At the annual meeting of the Panola County Medical Society, held in Sardis, April 3, Dr. J. G. Pou was elected president; Dr. J. P. Stovall, vice-president; Dr. Jacob M. Anderson, Batesville, secretary; Dr. John H. Walton, Sardis, delegate to the state association, and Dr. Edwin Wright, Sardis, alternate.

MISSOURI.

Sanitary Rules for Railroads.—By order of the State Board of Health, placards warning passengers against spitting on the floor are displayed in all railway coaches in the state, and in all railway waiting rooms and stations.

Commencement.—The graduating exercises of the Ensworth Medical College, St. Joseph, were held May 1, when a class of 31 received diplomas.——The trustees of the Ensworth Central Medical College and Hospital have filed application in the circuit court to eliminate the word "Central" from the name of the institution.

Society Meetings.—The Southwest Missouri Medical Society, at its annual session, held in Springfield, April 24 and 25, elected the following officers: President, Dr. William P. Patterson, Springfield; vice-presidents, Drs. C. A. Moore, Springfield, and Thomas Doolin, Ash Grove; secretary, Dr. Herbert B. S. Hill, Springfield (re-elected), and treasurer, Dr. Lee Cox, Springfield.——Taney County Medical Society was organized April 14, at Branson, by Dr. Theodore A. Coffelt, Springfield, councilor for the Twenty-eighth district. The following officers were elected: President, Dr. Charles W. Burdett, Branson; vice-president, Dr. James O. Nicholon, Protem; secretary, Dr. Elizabeth McIntire, Branson; censors, Drs. R. M. Irwin, Gretna; D. B. Mitchell, Forsythe, and Francis V. Baldwin, Forsythe; and delegate to the state association, Dr. Charles W. Burdett.

St. Louis.

Commencement.—At the annual commencement exercises of the College of Physicians and Surgeons, held April 27, degrees were conferred on 47 by Dr. Waldo Briggs, dean of the faculty.

Summer Course in Medicine.—The St. Louis University, for the first time in its history, has established a summer course in medicine for practitioners and students. The term will open May 25 and end July 4.

Contagious Diseases.—During the week ended May 2 there were reported to the health department the following new cases of contagious disease: Smallpox, 1; diphtheria, 19, with 2 deaths; scarlet fever, 31, with 3 deaths; typhoid fever, 4; measles, 51; varicella, 12; pertussis, 13, and consumption, 20, and 34 deaths.

Alumni Society Incorporated.—Application has been made in the circuit court for a pro forma decree of incorporation by the Medical Society of the City Hospital Alumni of St. Louis. Dr. William E. Sauer is president of the organization; Dr. Louis H. Hempelman, vice-president; Dr. William H. Luedde, secretary; Dr. E. Lee Dorsett, treasurer, and Drs. Louis H. Behrins, John C. Falk and Louis J. Oatman are directors.

Personal.—Dr. Frederick G. A. Bardenheier left recently for an extended period of European study.——Dr. Robert C. Atkinson fell recently, sustaining a fracture of the humerus.——Dr. John Young Brown will deliver the address on "Surgery" at the meeting of the Illinois State Medical Society, at Peoria.——Prof. William H. Warren has been selected as dean of the medical department of Washington University, vice Dr. Robert Luedeking, deceased.

Fitzporter Case Fails.—The indictment against Dr. John L. Fitzporter, charged with having sent prohibited matter through the mails, was dismissed by the United States District Court April 8, because the government was unable to furnish a bill of particulars, ordered by the court, setting forth the nature of the remedy which the defendant is said to have offered to furnish women on the payment of $25, in letters alleged to have been written by him.

Medical Council Election.—On April 3 the Joint Medical Council elected the following officers: Chairman, Dr. John C. Morfit; vice-chairman, Dr. Bransford Lewis; secretary-treasurer, Dr. John Green, Jr., and auditor, Dr. L. Claude McElwee. The council is vigorously pushing the question of doing away with the present antiquated method of municipal hospital control and substituting an organization in keeping with the modern ideas of hospital management.

Phenomenal Krauss Again.—About six months ago a medical faker calling himself "Phenomenal Krauss," made a well advertised entry into St. Louis. He had associated with him physicians whom he advertised as specialists. Postoffice Inspectors John Sullivan and S. J. Means collected sufficient evidence to lead the United States attorney to issue an order for the arrest of Krauss, charging a scheme to defraud. Krauss and his "specialists" were arrested April 29, and released under bond, pending hearing. He is said previously to have operated at Peoria, Ill., and Des Moines and Marshalltown, Iowa.

NEW JERSEY.

Medical Society Meetings.—Somerset County Medical Society, at its annual meeting, held in Somerville, April 9, elected the following officers: President, Dr. Henry V. Davis, North Branch; vice-president, Dr. Peter J. Zeglio, North Plainfield; secretary, Dr. Claudius R. P. Fisher, Bound Brook; treasurer, Dr. Thomas H. Flynn, Somerville; reporter, Dr. Aaron L. Stillwell, Somerville; censor, Dr. J. Henry Buchanan, North Plainfield, and delegates to the state society, Drs. J. Henry Buchanan and Peter J. Zeglio.——At the annual meeting of the Essex County Medical Society, held in East Orange, April 7, the following officers were elected: President, Dr. Wells P. Eagleton, Newark; vice-president, Dr. Charles D. Bennett, Newark; secretary, Dr. Ralph H. Hunt, East Orange; treasurer, Dr. Theodore W. Corwin, Newark, and reporter, Dr. Frank W. Pinneo, Newark.——At the annual meeting of the Morris County Medical Society, held in Dover, the following officers were elected: President, Dr. Christopher C. Beling, Newark; vice-president, Dr Arthur W. Condict, Dover; secretary, Dr. Henry W. Kice, Wharton; treasurer, Dr. James Douglas, Morristown; reporter, Dr. Jacob W. Farrow, Dover, and delegates to the state society, Drs. Peter S. Mallon, Morris Plains, and Clifford Mills, Morristown.—The Hudson County Association for the Advancement and Study of the Medical, Surgical and Sanitary Sciences was incorporatel April 1 by Drs. Joseph M. Rector, Edward P. S. Hart and Arthur P. Hasking, of Jersey City, and Dr. William W. Brooke, Bayonne, The association is incorporated under the "act to provide for the incorporation of pathological and anatomical associations for the advancement of medical and surgical science."——Plainfield Medical Society held its annual meeting April 2, electing the following officers: President, Dr. Ellis W. Hedges; vice-president, Dr. John H. Carman, and secretary-treasurer, Dr. Benjamin Van D. Hedges.

NEW YORK.

New York City.

Personal.—A dinner was given to Dr. Lee Frankel on the occasion of his resignation as manager of the United Hebrew Charities. Dr. Frankel is to occupy a similar position with Mrs. Russell Sage's $10,000,000 endowment fund.——Dr. and Mrs. Martin W. Ware sailed for Europe on the *Deutschland* April 30.

Milk Committee Meets.—The last two meetings of the series held by the New York milk committee on April 25 were unusually interesting. The subject under discussion for the afternoon meeting was "Pasteurized Milk;" in the evening the subject was "Certified and Other Clean Raw Milks." The purpose of the conference is to arrive at some constructive conclusion with respect to pasteurized milk.

Scarlet Fever and Diphtheria Epidemic.—An epidemic of scarlet fever and diphtheria has been menacing the Bronx for two months. During the past month nearly 1,000 cases have been reported to the board of health, and since the first of the year there have been as many as 40 cases of these two diseases reported in one day. The epidemic is believed by some to be due to overcrowded schoolrooms and the torn-up condition of the streets.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended April 25, 439 cases of tuberculosis, with 180 deaths; 1,891 cases of measles, with 39 deaths; 929 cases of scarlet fever, with 64 deaths; 344 cases of diphtheria, with 39 deaths; 33 cases of typhoid fever, with 11 deaths; 14 cases of whooping cough, with 1 death; 12 cases of cerebrospinal meningitis, with 7 deaths, and 153 cases of varicella, making a total of 3,815 cases and 341 deaths.

To Lessen the Number of Car Accidents.—The Public Service Commission has begun the work of seeing that the cars of the traction lines in the city are thoroughly equipped with safety devices to the end that the number of accidents may be diminished. In the six months ended Feb. 1, 1908, the street railways of Greater New York killed 299 persons and injured 944. The total number of accidents due to collisions of street cars was 1,196, and the number of vehicles and persons struck by cars amounted to 14,000.

Last Harvey Lecture.—The tenth and last lecture in the Harvey Society course will be delivered at the New York Academy of Medicine building Saturday, May 9, at 8:30 p. m., by Prof. A. E. Schäfer of the University of Edinburgh, on "Artificial Respiration in Man." Professor Schäfer, who has come to the United States to give the Herter lectures at Johns Hopkins Medical School, was chairman of a committee appointed by the Royal Medical and Chirurgical Society to investigate the phenomena attending death by drowning and the means of promoting resuscitation in the apparently drowned. His lecture will embody the results of much practical work on the subject of artificial respiration.

OHIO.

Hospital News.—At a meeting of the incorporators of the Union Hospital, Canal Dover, held March 24, Dr. R. S. Barton was re-elected a member and Dr. Samuel B. McGuire was

elected president of the board.——The Emergency Hospital, Mansfield, erected at an expense of nearly $18,000, was opened for inspection March 17, and will soon be ready to receive patients. The institution offers accommodation in two wards for male patients, in one ward for female patients and two private rooms, accommodating in all 18 patients.——At the annual meeting of the staff of the Aultman Hospital, Canton, Dr. Frank W. Gavin was elected president; Dr. David F. Banker, vice-president; Dr. Charles A. Crane, secretary, and Dr. Edward O. Morrow, treasurer. A new operating amphitheater is soon to be built. Dr. Maria G. Pontius was elected a member of the staff, vice Dr. Katherine Burns, deceased, and Dr. J. Eugene Shorb was made radiographer.——The Solar Refining Company has made a donation of $1,000 to the Lima Public Hospital.

PENNSYLVANIA.

New Dispensaries Opened.—The State Department of Health has now opened 60 tuberculosis dispensaries in various parts of the state. The last two are located at Everett, Bedford County, in charge of Dr. Walter de la M. Hill, and at Stroudsburg, Monroe County, in charge of Dr. William E. Gregory. Another dispensary will be opened at Easton soon.

Millions in Benefits.—According to the report of the Pennsylvania Railroad Employé's Relief Fund for the twenty-five years of its existence, $18,000,000 in benefits has been paid out. The fund from which these payments were made is formed by voluntary contributions from members, from interest paid by the company on monthly balances and from income and profit on investments. There has been distributed $10,316,096, in 715,759 cases of disablement for periods ranging from one day to twenty-one years. Death benefits amounting to $7,117,962 have been paid to families of 12,365 deceased members. The company pays the cost of maintaining the fund, and the operating expenses of the relief department amounted to $2,686,908. The railroad paid deficiencies, amounting to $654,741, for relief to sick members, who had exhausted their title to benefits. The relief fund has a membership of 95,089, or an increase of 400 per cent. since its organization.

Philadelphia.

Extension and Improvement of Sewage System.—During the past week the director of public works has awarded contracts amounting to $247,052 for the extension and improvement of the city's sewage system.

Bequests.—By the will of the late Jane B. Shain, the Working Home for Blind Men and Blind Women of Philadelphia will receive $1,000 each and the Baptist orphanage of Philadelphia will receive $5,000.

Large Hall for Dr. McCormack.—On account of the large number of applications for tickets for the McCormack meeting, May 11, the committee of arrangements has secured the auditorium of Witherspoon Hall, which has a seating capacity of 1,000.

Cornerstone Laid.—The ceremonies of laying the cornerstone of the new home of the College of Physicians of Philadelphia, took place April 29. After an invocation by Bishop Whitaker, a short address was delivered by the president of the college, Dr. James Tyson, and the cornerstone was then placed by Dr. S. Weir Mitchell.

Physician Awarded Fee.—Dr. John H. Gibbon was awarded $500 by Judge Martin's court, April 16, for operating on a patient for appendicitis. The doctor's original bill was for $1,000, which was later reduced to $500, but the patient refused to pay more than $100. The annual income of the patient was $5,000.

Contract Awarded for New Hospital.—A contract has been awarded for the erection of the Frederick Douglass Memorial Hospital. It will be a five-story and basement structure, 60 by 135 feet, and containing receiving wards, operating room, physicians' and servants' quarters and a number of large ward rooms. The cost will be about $75,000.

Program for Medical Day.—The medical day of Founders' Week will be held in the Academy of Music, and the following program has been arranged: "The College and Allied Institution of Philadelphia." George A. Pearsoll; "The Great Hospitals of Philadelphia." Dr. J. Chalmers Da Costa; and "The Development of Practical Medicine in Philadelphia," Dr. James M. Anders.

Smallpox.—Two more cases of smallpox were discovered in the southern section of the city during the past week, and as a result six houses were quarantined and about 200 persons residing in the neighborhood were vaccinated. The disease appeared in the section where two cases were found in the preceding week. The patients have been removed to the municipal hospital, and the malady is reported to be of mild type.

Measles Prevalent.—According to the returns made to the health bureau, measles is present in all sections of the city, and the number of cases reported for the first four months of the year were greater than for any corresponding previous period. The total number of cases reported during this period reached 4,102, distributed as follows: January, 359; February, 616; March, 1,017, and April, 2,110. During the week ended May 2, 504 cases were reported.

German Hospital Physicians' Meeting.—The annual meeting and banquet of the Association of Ex-Resident Physicians of the German Hospital was held May 1. Dr. Albert D. Whiting acted as toastmaster, and addresses were made by Drs. Charles Turnbull, Aloysius O. J. Kelly, Sherborne W. Dougherty and Mark Weed. The following officers were elected: President, Dr. James F. Berlet; vice-president, Dr. Henry F. Page; secretary and treasurer, Dr. Alfred Miller; and member of the executive committee, Dr. John F. Sinclair.

Health Report.—The total number of deaths reported for the week ended May 2 reached 513, including 242 males and 271 females. This is an increase of 14 over the preceding week and a decrease of 53 from the corresponding week of last year. The principal causes of death were: Typhoid fever, 14; measles, 17; scarlatina, 5; pertussis, 5; diphtheria, 8; consumption, 64; cancer, 21; meningitis, 4; apoplexy, 15; heart disease, 57; acute respiratory disease, 74; enteritis, 20; hepatic cirrhosis, 6; appendictis, 4; Bright's disease, 30; premature birth, 8; congenital debility, 7; suicide, 2; accidents, 19, and marasmus, 4. There were 208 cases of contagious disease reported, with 27 deaths, as compared with 201 cases and 28 deaths reported in the previous seven days.

WASHINGTON.

Osteopaths and State Politics.—At the annual meeting of the Washington Osteopathic Association, held in Seattle, a candidate for governor was nominated, the association claiming that this was the only one of the various candidates who would give osteopathy a square deal. The association is said to be prepared to expend funds in its treasury to work against any candidate who is known to favor legislation against osteopathy, and to aid in legislation favorable to their cult.

Hospital Notes.—The Pulmonary Hospital of the city of Seattle has been incorporated by Drs. James B. Eagleson, Clarence A. Smith, William R. M. Kellogg and others. A fund of $50,000 is now available, and a building site will be selected and a building erected at once.——The King County Humane Society is interested in a movement to use the detention hospital at Seattle for aliens, where immigrants from the Orient, believed to be suffering from contagious diseases, may be isolated.——Dr. Franklin L. Carr, Hoquiam, is making arrangements to re-open his hospital at Montesano.——Drs. M. Jones and Joseph H. Fitz are about to open a hospital at Montesano.

GENERAL.

Physicians' Filing Cabinet Companies.—We have received several letters from physicians complaining that they are unable to have delivered to them cabinets purchased from the Simmons Agency and James H. Graves & Co., both of Chicago, and recommending that no money be forwarded to either of the above firms until the goods ordered are received.

Volunteer Emergency Service.—The National Volunteer Emergency Service, instituted in 1900, has recently been reorganized, Dr. James Evelyn Pilcher, Carlisle, Pa., being elected director general, and Dr. F. Elbert Davis, adjutant general. The work of the service is conducted along military lines, details being worked out in three separate corps, first-aid, public health and medical.

Coming Meetings.—The eleventh annual meeting of the American Gastro-Enterological Association will be held at the Auditorium Hotel, Chicago, June 1 and 2, under the presidency of Dr. John P. Sawyer, Cleveland, Ohio.——The Medical Association of the Southwest will meet at Kansas City, Mo., October 20 and 21, under the presidency of Dr. Thomas E. Holland, Hot Springs, Ark.——The annual meeting of the National Confederation of State Medical Examining and Licensing Boards will be held at the Lexington Hotel, Twenty-second Street and Michigan Avenue, Chicago, June 1, under the presidency of Dr. George W. Webster, president of the Illinois State Board of Health.——The annual meeting of the National Association for the Study of Epilepsy and the Care and Treat-

ment of Epileptics will be held in Indianapolis, November 10 and 11, Dr. H. M. Weeks, Spring City, Pa., presiding.

CANADA.

Hospital News.—The proposed by-law to raise $225,000 for the purpose of the Winnipeg General Hospital has been killed in the Winnipeg city council, the mayor ruling there was no authority for submitting the question to a vote of the ratepayers.

Personal.—Dr. John T. Fotheringham, Toronto, will represent the Canadian Militia Medical Service at the meeting of the Army, Navy and Ambulance Section of the British Medical Association at Sheffield in July.——Dr. E. Ralph Hooper, Toronto, will spend several months in England and on the continent.——Dr. David E. Mundell, Kingston, has been appointed chairman of the medical section of the Canadian Fraternal Congress.

Annual Meetings.—The annual meeting of the Association of Ex-House Surgeons of Toronto General Hospital was held in Toronto, April 15, 40 being present. Dr. Thomas B. Futcher, associate professor of medicine in Johns Hopkins University, Baltimore, was present and delivered an address. The vice-chairman of the board of governors offered a handsome prize to the ex-house surgeon who would publish during the coming year the best contribution to medical literature. The following officers were elected: President, Dr. Alexander Taylor, Goderich, Ont.; vice-president, Dr. Frederick Fenton, Toronto; treasurer, Dr. William B. Hendry, Toronto; and secretary, Dr. John N. E. Brown, superintendent of the Toronto General Hospital.——The annual meeting of the Canadian Hospital Association was held in Toronto, April 21 and 22. "No Visitors Allowed" was the text of an address delivered before the association by Dr. Charles Sheard, medical health officer of Toronto, who characterized visitors to hospitals as nuisances. Dr. Henry M. Hurd, superintendent of the Johns Hopkins Hospital, Baltimore, delivered an address on "General Practitioners and Mental Diseases." The following officers were elected: President, Dr. W. J. Dobbie, superintendent of the Free Hospital for Advanced Cases of Tuberculosis, Weston, Ont.; vice-president, Dr. A. D. McIntyre, superintendent of the Kingston General Hospital, and secretary, Dr. John N. E. Brown, superintendent of the Toronto General Hospital.

FOREIGN.

Memorial to Annandale of Edinburgh.—Subscriptions are being collected to place a bust of the late Professor Annandale in his old lecture theater and to endow a gold medal to be awarded annually in his name. The appeal for subscriptions is signed by the principal of the university and others. Subscriptions are received by H. M. D. Watson, 13 Rutland Square, Edinburgh.

Lennander's Property Left to Medical Science.—The late Professor Lennander, the well-known surgeon of Upsala, Sweden, bequeathed his entire property to endow scholarships for medical students, for stipends for research work, and for a fund to provide free postgraduate courses in surgery, hygiene and other branches of medicine. He gave his library to the local medical society and his various collections to the Art Institute.

International Good Roads Congress.—An international gathering of those interested in promoting and the structure of good roads is to be held at Paris, October 11 to 18, this fall. Besides the purely technical questions, the subject of dust and its bearing on the public health and means of suppression will be discussed. Further details can be obtained on application to the general secretary at the Department of Public Works, Boulevard Saint-Germain 244, Paris, France.

Annual Meeting of the German Antiquackery Society.—The report of the work accomplished by the society during the last year, reviewed at the annual meeting held at Berlin, March 14, is very encouraging. The society is in good financial condition owing to the increasing membership, many medical societies and other organizations having joined it as well as individual physicians and laymen. The "quackery exhibition," held in the parliament buildings as part of the exhibit connected with the recent International Congress for Hygiene and Demography, attracted great attention, especially on the part of the state authorities. The "quackery exhibition" presents a graphic picture of the fraud, deception and injury of the public health from quack practices, and the past criminal records of many of the quacks, etc. One exchange comments that the exhibition was probably the entering wedge which made possible the bill now pending in parliament for restriction of irregular practice of medicine (described in these columns April 11, page 1213). A delegate from Austria stated that the regulations in that country against quacks are so stringent that there is practically no open quackery in that country. What there is bears the stigma of fraud and unreliability. The officers of the German society are Dr. Siefart (Hardenbergstrasse 39, Charlottenburg), Jakob, Lennhoff, Kempner and Manasse. The official organ of the society is now the popular *Guide to Health—Gesundheitslehrer*, published by Dr. Kantor.

LONDON LETTER.

(*From Our Regular Correspondent.*)

LONDON, April 18, 1908.

Doctors Who Do Not Keep Their Windows Open.

The open-air treatment of consumption and hygienic teaching on the subject of ventilation has caused in recent years a great change in the habits of the people with regard to opening windows. The old belated idea that open windows involved a danger of catching cold has given place to an appreciation of the advantages of a good supply of fresh air and of the evils of badly ventilated rooms. Nevertheless, many persons who may claim to be enlightened cling to the old practice. It occurred to an enterprising daily paper to find out whether or not physicians practice what they preach in the matter of fresh air, and to take a census of physician's windows in the districts inhabited by the leading consultants—Harley street, Wimple street and Cavendish Square at 12 o'clock at night. In Harley street only 126 out of 1,390 doctors' windows were open. In Cavendish Square, the most fashionable medical locality in London, the number open was 10 in 161. In Wimple street only 58 out of 1,149 windows were open. In the two streets and the square there were 2,700 doctors' windows. A daylight inspection showed that 522 of them were open and, according to the preceding figures, at night the number had fallen to 194. The weather during these inspections was pleasant.

Miscellany

MEDICAL LEGISLATION IN 1907-1908.

During the past winter the legislatures in the following states have been in session: Georgia, Illinois, Idaho, Kentucky, Kansas, Maryland, Massachusetts, Mississippi, New Jersey, New York, Ohio, Oklahoma, South Carolina and Virginia. The legislature in Louisiana has just convened. A number of bills of interest to the medical profession have also been before Congress. We give below a synopsis of medical legislation for the year:

NATIONAL.

The most important bill introduced in Congress was the bill for the reorganization of the Army Medical Department, which became a law April 23, 1908. The object of this law is to secure a medical corps which will be adequate to perform the medical service of the Army in time of peace; to provide means of expansion to meet the conditions in time of war and special needs in time of peace; to offer sufficient inducement in the way of pay and promotion to attract the desirable class of young physicians, and to abolish the contract surgeon system. Under this law the personnel of the medical department has been increased from 320 to 443. Further increase will probably be required in the near future. The law provides for 14 colonels, 24 lieutenant-colonels, 105 majors and 300 captains and first lieutenants. It also provides that first lieutenants shall be promoted to the grade of captain after three years' service instead of five, thus giving the medical officers of the Army the same advantage regarding promotion possessed by medical officers of the Navy. Expansion of the medical corps in time of war is provided for by the organization of a Medical Reserve Corps, auxiliary to the regular medical corps. This reserve corps is to be composed of first lieutenants, regularly commissioned as such and holding all the authority, rights and privileges of commissioned officers of the same grade in the regular medical corps, except promotion and retirement. These rights, however, are held only when on active duty. In order to provide for the large number of contract surgeons now in the military service, the law specifies that on the favorable recommendation of the surgeon-

general, contract surgeons shall be eligible to appointment on the reserve corps without further examination.

The passage of this bill marks the restoration of the Medical Department of the Army to the same position which it occupied previous to the Army reorganization. The immediate effect can be judged from the fact that since the bill passed the Congress five weeks ago there have been 35 applications filed for appointment on the medical corps as compared with 47 applications in the preceding seven months. This bill received the endorsement of the Conference, as well as of the Committee on Medical Legislation, which latter body exerted its influence in favor of the measure.

At the beginning of the present session of Congress, three bills affecting the Medical Corps of the United States Navy were introduced. None of them has become a law. It is understood that they have been withdrawn for the purpose of amendment and revision, and will be introduced in improved form at another session. The usual bill providing for a board of osteopathic examiners for the District of Columbia was introduced into the House early in the session. This bill has not been reported on. Some variety has been added to the usual program by the introduction of a bill establishing a board of examiners for "chiropractics," whatever they may be. This bill also has remained in committee.

STATE LEGISLATION.

The amendment to the Illinois practice act has already been commented on.

No legislation of direct medical interest has been reported from Georgia or Idaho.

The Louisiana legislature has only recently convened and no definite reports have yet been received.

KANSAS.

An amendment to the medical practice act, approved Jan. 31, 1908, was adopted by the legislature. The amendment consists in an addition to the definition of the practice of medicine, adding the following clause to the definition of those who shall be regarded as practicing medicine and surgery within the meaning of the act:

. . . . "or any person attempting to treat the sick or others afflicted with bodily or mental infirmity; or any person representing or advertising himself by any means or through any medium whatsoever or in any manner whatsoever, so as to indicate he is authorized to or does practice medicine or surgery in this state, or that he is authorized to or does treat the sick or others afflicted with bodily infirmities."

KENTUCKY.

The last session of the Kentucky legislature was productive of one of the best pure food laws yet enacted by any state. A synopsis of this law appeared in THE JOURNAL for March 21, 1908. This act, together with the pure food laws of Tennessee and Iowa, constitutes the best state legislation on this subject yet formulated. The Kentucky and Tennessee laws have been reprinted in pamphlet form and can be obtained from this office on receipt of a stamped-directed envelope. A law appropriating $25,000 for the use of the state board of health was passed by the legislature, but was vetoed by the governor. A bill defining the crime of abortion and prescribing a penalty therefor was also vetoed by the governor. Other bills introduced were a bill establishing a central bureau of vital statistics for the registration of births and deaths, a bill changing the name of the Agricultural and Mechanical College of Kentucky to the State University of Kentucky and providing for a medical department thereof, a bill amending the state board of health act by placing the appointing power in the hands of the governor, a bill authorizing the state board of health to arrange for school instruction for the prevention of tuberculosis, typhoid fever, diphtheria and other preventable diseases, and a bill providing for the establishment of a state sanitorium for the cure and treatment of tuberculosis.

MARYLAND.

The bill which has attracted the most attention in Maryland has been the so-called "healers" bill, referred to frequently as the "Anti-Christian-Science Bill," as it was assumed that the bill was aimed at that sect more than any other. The bill amends the Maryland medical practice act by adding the following amendment to the definition of the practice of medicine:

"Any person shall be regarded as practicing medicine who shall append to his or her name any title indicating that he is a healer or who shall profess to heal any ailment or supposed ailment, or who for hire or any gratuity or compensation, directly or indirectly, to him paid by or for any patient, shall undertake to treat, heal, cure, drive away or remove any physical or mental ailment or supposed ailment of another by mental or other process, exercised or invoked, on the part of either the healer or the patient, or both."

This amendment was passed by both houses of the legislature and became a law through the governor's signature. As this is the first instance of state legislation directed specifically at the mental healers, it is of particular interest.

This bill was not introduced nor pushed by the medical profession, but was inaugurated and supported by laymen entirely. The principal objection urged against the bill was not that it prohibited the "healer" from following his religious views, but that it forbids healing for a fee. It does not interfere in any way whatever with the belief, teaching or practice of Eddyism as a religion, neither does it prevent any followers of this cult from adding their "healing efforts" to the work of a legally qualified physician who is endeavoring to restore the patient to health. The bill was prepared and introduced by two laymen, one of whom lost two of his children on account of his wife's adherence to Eddyism. The debate in both the senate and house was heated and the interest manifested throughout the state was intense, but the bill was finally adopted.

Other bills introduced were for the regulation of the sale of milk; for the inspection of cattle; to prevent expectoration in public places; for the examination of school children; for the appropriation of money to aid in the erection of a building in Baltimore for the Medical and Chirurgical Faculty—the state society—and for the drainage of swamp lands in order to exterminate mosquitoes. The bill appropriating $100,000 for a faculty building was amended by substituting $25,000, and passed in this form.

MASSACHUSETTS.

A number of bills have been introduced into the Massachusetts legislature, notably, a bill providing for the appointment of a state board of examiners in "optometry;" a bill providing for the registration of osteopaths; a bill prohibiting compulsory vaccination; a bill providing for a nurses' registration board; a bill prohibiting expectoration in public places and a bill providing for the keeping of records of births by physicians and midwives. The state board of registration also presented an amendment to the medical practice act, defining medical practice and recommending the adoption of an amendment requiring a four years' course of study in a chartered school of medicine. The provisions of the Massachusetts act in these particulars are weak, and the board of registration has attempted repeatedly to secure a better law. We have not been advised regarding the passage of any of these bills.

MISSISSIPPI.

The following bills have been introduced into the state legislature: A bill regulating the sale of cocain; a bill to prevent the spread of tuberculosis; a bill regulating the manufacture and sale of cigarettes; a bill amending the Mississippi code so as to require the examination of persons suspected of insanity by two reputable physicians instead of before a jury; a bill creating a pathologic and chemical laboratory for the use of the state board of health; a bill giving physicians a lien on the crop of any person indebted to them; a bill changing the manner of appointing the county medical officer; a bill regulating the practice of optometry; a bill providing for a bureau of vital statistics, and a bill regulating the board of health law.

The last bill, which provided for a board of health of ten members, all to be nominated by the Mississippi State Med-

ical Association, was defeated, the law being retained as it stood, providing for five members to be nominated by the state association and eight members, one from each congressional district, to be appointed by the governor. The bill creating a state board of examiners in optometry passed the house of representatives and was defeated in the senate.

NEW JERSEY.

The bill which has attracted the most interest from a medical point of view has been the anti-vivisection bill. This bill modeled closely after the New York bill, was drafted for the express purpose of hampering the work of the Rockefeller Institute. The state medical society organized a determined fight against the bill. Two hundred and fifty prominent physicians from all parts of the state, together with leading scientists and educators of the medical profession from New York City, Philadelphia, Princeton University, etc., appeared before the committee to which the bill had been referred and spoke against its adoption. The arguments made for and against the bill were reviewed in THE JOURNAL, March 21.

An osteopathic bill was also introduced, which was opposed by the medical profession of the state on the ground that the amendment lowered the requirements by lessening the prescribed course of study. Neither of these bills was passed. A new board of health bill was also adopted.

NEW YORK.

The bills which have attracted the most attention in New York have been those amending the medical practice act passed last winter. An adroit attempt to lower the standard was made by a bill which changed only the word "and" to "or," but which would have allowed osteopaths from outside the state of New York to secure license in the state without having had more than a two-year course. An optometry bill was also introduced and passed both houses and is now in the hands of the governor. The usual anti-vivisection bill providing restrictions on animal experimentation was withdrawn by the introducer.

OHIO.

A most vigorous campaign for better health regulations has been carried on by the committee on medical legislation of the Ohio State Medical Association. A large number of bills has been introduced at different times, some of which, such as the Elson non-medical healing bill, the optometry bill, the nurses' bill, etc., have been commented on in THE JOURNAL from time to time in the past few months. A summary received from Dr. J. W. Clemmer, chairman of the state committee on public policy and legislation, reads as follows:

"The Elson non-medical healing bill was defeated in the house by a vote of 31 to 50. The optometry and nurses' bills were not taken out of committee. The following bills have been enacted: The pure food and drug bill; bill regulating buildings for occupancy and habitation; bill providing county hospitals for tuberculosis; bill for the regulation of lying-in hospitals and maternity boarding houses. The vital statistics bill, introduced by Mr. West, passed both houses. The medical advertising bill, drafted along the lines of the Colorado law, has passed the house, and it is to be hoped will pass the senate in the last week of the session."

The medical profession, as well as the state legislature in Ohio, is certainly deserving of much credit. The Elson non-medical healing bill was a most absurd piece of legislation, but was supported throughout by the proprietary medicine men of the state in an effort to "get even" with the medical profession in Ohio on account of the pure food and drug bill and the agitation regarding "patent medicines." The bills establishing boards of registration for optometrists and for trained nurses were both objectionable. It is certainly a noteworthy achievement when a state association secures legislation regulating pure food and drugs, passes a vital statistics law, and at the same time prevents the adoption of any vicious bills.

OKLAHOMA.

The legislature of the state of Oklahoma has been in session all winter, framing legislation for the new state. As is to be expected, a large number of bills has been presented and much discussion has ensued. Extended comment on legislation in this state is defered until the legislature has completed its work.

SOUTH CAROLINA.

A bill establishing a board of registration of trained nurses failed of adoption. The most important law passed was an amendment to the medical practice act which gave the State Board of Medical Examiners the power to revoke the license of any practicing physician or surgeon qualified under the act or qualified prior or subsequent to the passage of the act, for felony, gross immorality, addiction to liquor or drugs or conviction of illegal practices. The clause in the law allowing the board to issue licenses on the strength of five years of practice was eliminated. Osteopaths are required to pass an examination in all branches except materia medica, therapeutics and major surgery.

A bill authorizing the appointment by the state board of health of a state health officer was also adopted. As the result of the passage of these two laws, the position of both the state board of health and the State Board of Medical Examiners is greatly strengthened.

A bill prohibiting the manufacture and sale of adulterated or misbranded food or drug articles also became a law.

VIRGINIA.

A vital statistics bill, providing for the registration of deaths in Virginia, was introduced and was supported by the medical profession of the state, but was defeated by the united opposition of the undertakers of Virginia, who were opposed to the features of the bill requiring death certificates, burial permits, etc.

The bill in which the medical profession of the state was most interested was one repealing the license tax levied on practicing physicians. The medical profession in the state has repeatedly endeavored to secure the repeal of this law, but has not as yet been successful. A bill creating a state board of health and appropriating $40,000 yearly for its use became a law, as well as an act authorizing the appointment of a state dairy and food commissioner who should have oversight of the dairy food and drink products and of the manufacture and sale of them in the state. This latter law, while the title relates entirely to the appointment of a dairy and food commissioner, is in reality a pure food law.

Medical Language.—The writings of Hippocrates, Aristoteles and Galenos, as well as of Celsus, Plinius and Vegetius, are, and will remain for all scientists, the basis and test for correctness of language, and purity of Greek and Latin terms in the domain of natural philosophy. Pollux, in his Greek "Onomasticon," has stored up the existing supply of medical onomatology. It is by this means that these sciences still bear to-day the stamp of intercommunity, simplicity and internationality, and this fact makes it an indispensable duty for every physician and natural philosopher to acquire a knowledge of these two languages. Without a knowledge of etymology and the laws of word construction a linguistic expression will not be retained in the memory; it possesses neither sense nor form, its relations and differentiations are unrecognizable and obscure, throwing the door wide open to arbitrary misconception and linguistic malformations.—D. H. Zimmerer, Professor of Philology, Regensburg, Germany.

Why Children Are Stupid.—The so-called stupidity, inattention, indifference to study, ill-temper, incorrigibility and truancy of children are in reality, in a large percentage of cases, simply the indirect result of some physical defect that influences the whole moral and mental state of the child. Such children, instead of being given extra tasks, by way of punishment, the rod or the discipline of the reformatory, really need glasses to correct eyestrain, the removal of adenoids, more fresh air, healthful exercise, or the services of a good dentist. Children under 8 years of age should be cared for in playgrounds, situated in parks, where nature study and systematic exercises may be carried out. Gymnasiums and forced baths are often most valuable.—From a lecture by Dr. H. Warren Buckler.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Podophyllum or Mayapple.

Podophyllum is the dried rhizome of a perennial herb which grows in the woods of Canada and northern and middle United States, and is sometimes called wild mandrake and umbrella plant. It contains besides starch, a resin (4 to 5 per cent.), a gum, a fixed oil and gallic acid. The active principle is contained in the resin, and is called podophyllotoxin, to which is due the purgative properties of the drug. The resin also contains podophyllinic acid.

The drug is practically without odor, but has a bitter, acrid taste. It is slightly irritant to the skin, and decidedly so to mucous membranes, and, therefore, is slightly stimulant to the stomach mucous membrane, but acts mostly on the intestinal canal, causing increased peristalsis. Its action is very slow, taking from ten to fifteen hours to cause a movement of the bowels. There may be some griping pains, perhaps accompanied by a little nausea and rarely vomiting. The movements are soft, and if the drug has been taken alone, there may be several. In proper combinations only one good movement a day occurs, making this drug valuable as a laxative. It seems to cause an increased output of bile, and, therefore, stimulates the activity of the liver. It also probably reflexly or otherwise stimulates the other digestive organs. As it can cause considerable griping and irritation of the intestines, even to causing blood-stained stools, the drug should not be used as a cathartic. As it seems to be active in the duodenum and a stimulant to the liver, it has been classed as a cholagogue. Its irritant action should class it with the irritant or drastic cathartics, although its best use is in small doses in combination with other mild cathartics as a laxative. Consequently its best use is in chronic constipation.

The most active preparation is the resin, which should be combined with other slow-acting cathartics, as aloes, rhubarb or colocynth. It should not be given with cathartics that act quickly, as it would then either be useless and pass off without any action at all, or would cause irritation of the bowels and movements after the quicker acting cathartic had finished its work. It should be remembered that this drug is an irritant, and consequently should not be administered when there is inflammation of the intestines, and should probably not be given to children. Its overaction has caused death. Besides its combination with other slow-acting cathartics, a drug to control its tendency to cause griping is indicated. In other words, it is well combined with hyoscyamus or belladonna, and sometimes with an aromatic like ginger or capsicum.

The full dose of the drug itself is 0.5 gram, or 7½ grains, but as there is occasionally a susceptibility of patients to overaction from this drug, the beginning dose should be smaller than the above.

The best preparation is:

RESINA PODOPHYLLI (podophyllin), the resin of podophyllum. The laxative dose is 0.005 gram, or 1/12 grain.

FLUIDEXTRACTUM PODOPHYLLI is the only other official preparation of podophyllum. The laxative dose is 0.25 c.c., or 4 minims.

The resina podophylli is an ingredient of the following official and National Formulary pills:

Pilula Cathartica Vegetabilis, U. S. P.
Pilula Podophylli Belladonnæ et Capsici, U. S. P.
Pilula Aloes et Podophylli Composita, N. F.
Pilula Aloini Composita, N. F.
Pilula Colocynthidis et Podophylli, N. F.
Pilula Laxativæ Post Partum, N. F.
Pilula Triplices, N. F.

The dose of any of these is one pill, increased if deemed advisable.

The Pilula Podophylli Belladonnæ et Capsici is the only one of the above that has podophyllum as its only cathartic. The other pills are all in combination with other laxatives or cathartics. The Pilula Cathartica Vegetabilis contains besides the resin of podophyllum, compound extract of colocynth (which contains besides colocynth, aloes and scammony), hyoscyamus, jalap and leptandra. The Pilula Aloes et Podophylli Composita and the Pilula Aloini Composita contain aloes and podophyllum and aloin and podophyllum respectively. The Pilula Colocynthidis et Podophylli contains the compound extract of colocynth and the resin of podophyllum. The Pilula Laxativæ Post Partum contains the compound extract of colocynth, aloes, ipecac, resin of podophyllum, and extract of hyoscyamus. The Pilula Triplices contains aloes, mercury and podophyllum.

Acne.

Dr. Sutton, Kansas City, Mo., in the *Therapeutic Gazette*, Feb. 15, 1908, discusses the etiology and treatment of this common disease of the skin. It occurs most frequently from the time of puberty to 24 or 25 years of age, and if it occurs later in life is due to some distinct digestive disorder. It is often accompanied or preceded by fermentative dyspepsia, constipation, anemia, and in girls and women by uterine disturbances. Sutton does not think that sexual indiscretions have much to do with causing the disease. Certainly living or working in dusty atmospheres and the infrequent use of soap and water on the face are distinct etiologic causes.

While the prognosis of cure is favorable, the length of time it will take for the condition to be cured varies from one to several months, and there are few skin diseases in which systemic treatment is more important.

Good hygiene, perfect cleanliness, perfect hydrotherapeutic care of the skin, fresh air during sleep, outdoor exercise and a proper diet are necessities for cure that can not be overestimated. All sweets, as candies and cakes, fried stuffs and greases (as gravies), hot breads, pastries, pancakes, oatmeal and other gummy cereals should be avoided. Iced water and excessive amounts of tea, coffee, and even rich cocoa should be prohibited. Much sour food, whether taken as condiments, as pickles or as vinegar, should also be avoided. A constipated condition should be corrected by the means found best for the individual patient, i. e., by diet, exercise, plenty of water between meals, fresh fruits, and if must be, by the laxative found best, with cascara sagrada as the preference.

If the appetite is poor, a bitter tonic before meals is indicated, and none better than nux vomica or gentian, as:

℞. c.c.
Tincturæ gentianæ compositæ.....100| or fl℥iv
Sig.: A teaspoonful, in water, three times a day, before meals.

Or:

℞. c.c.
Tincturæ nucis vomicæ..... 25| or fl℥i
Sig.: Five drops, in a wineglass of water, three times a day, before meals.

When the "utero-ovarian system is not properly performing its function" in young girls, Sutton finds that the administration of ovarian extract is beneficial, as:

℞.	gm.		
Glandularum ovarianarum siccarum.....	2	or	gr. xxx

Fac capsulas 20.

Sig.: One capsule twice a day, between meals.

He advises using the above capsules for one week, then discontinuing for a week, and then repeating.

If there is a scanty menstrual flow or much dysmenorrhea, he advises the administration of viburnum, as:

℞.	c.c.		
Fluidextracti viburni prunifolii.....	50	or	fl℥ii

Sig.: One-half teaspoonful, in hot water, every three hours.

If there is anemia he, of course, uses iron and arsenic, alone or together, taking care not to upset the digestion, as:

℞.	gm.		
Ferri reducti	2	or	gr. xxx
Arseni trioxidi	.04		gr. ⅔

M. et fac capsulas 20.

Sig.: One capsule three times a day, after meals.

He finds ichthyol, or some combination of it, of advantage in relieving the intestinal indigestion of acne patients, and uses it nearly always in this disease.

℞.	gm.		
Ammonii ichthyosulphonatis	6	or	3iss
Glycyrrhizæ	q. s.		q. s.

M. et fac capsulas 20.

Sig.: One capsule three times a day, after meals.

Sutton prefers the ichthyol in the form of the albuminate, viz., ichthalbin, made up into 5-grain tablets (one three times a day, after meals).

As to local treatment, he recommends that the comedones be expressed each day with an instrument made especially for that purpose, and as to external applications he thinks that lotions are the best, and as a mild application recommends the following:

℞.	gm. or c.c.		
Zinci sulphatis	1	50	gr. xxx
Sulphuris præcipitati	4	or	
Potassii sulphidi	4		ää. 3i
Aquæ	100		fl℥iv

M. et Sig.: Shake well, and apply with a cotton swab night and morning.

[This should be dispensed in a dark bottle.]

When the type of the disease is more severe, all the active ingredients should be increased in strength. "The effect is stimulating, astringent and antiseptic." If the superficial inflammation which is caused by this application is too great, the simple sweet unguentum aqua rosa is as satisfactory as any other ointment.

In the deep, indurated forms of acne the pus sacs should be opened with a bistoury, "the contents squeezed out, and the cavities mopped with a tiny cotton swab dipped in pure phenol (carbolic acid)." The above treatment he has found generally satisfactory, and various disagreeable ointments are not needed.

If the disease is aggravated and does not readily yield to treatment, he obtains good results with the *x*-ray. He prefers to use "a soft tube, placed from 30 to 50 centimeters from the affected area, making the exposures very brief (from two to five minutes at first)," and repeats the treatment two or three times weekly. If the patient is to be thus benefited, improvement is soon apparent.

Enterocolitis of Young Children.

Three valuable papers on this subject, which it is none too early in the season to discuss, appeared in the *British Medical Journal*, Oct. 13, 1906. The first paper, by Dr. Charles G. Kerley, New York, was on the prevention of this disease.

As the best prevention, viz., removal to a cool, healthy climate, can not often be inaugurated, the prevention at home with poor environment must be discussed. He says that the predisposing causes are a disordered gastrointestinal tract, infected food, faulty feeding methods, and an absence of appreciation on the part of the parents and even physicians of the fact that an attack of diarrhea or vomiting, or even a green, undigested stool occurring in an infant under eighteen months of age during the hot summer should be looked on as a serious matter requiring prompt relief. As the diet of the artificially fed child is milk, which so readily becomes infected, the best safeguard against accidental imperfections in the milk is a healthy resistant intestine. The child's intestine becomes unhealthy and susceptible to infections or to toxins taken in by the mouth from the foolishness and ignorance of mothers who feed their children a little of all sorts of foodstuffs. The resistance power of such children having been reduced, an unclean milk during the heated term starts the enterocolitis, and the prognosis is serious.

As the ability is developed in different communities for mothers to obtain pure milk for their young children, the frequency of this disease will diminish. Kerley also advises the proper instruction of every mother whom the physician sees (and especially in dispensary practice, and best by printed pamphlets), in the way to prepare the baby's food. She should be taught that her own hands must be thoroughly cleansed as well as the utensils used in preparing the food, and that the milk should be as pure and clean as can be obtained. She should next be told that at the first sign of intestinal derangement, regardless of the season of the year, the milk should be stopped at once and the baby sustained for a day or so on some "cereal water, such as barley or rice, together with the administration of a dose of castor oil."

Kerley particularly emphasizes the necessity for the prevention of little inflammations of the intestinal canal during other seasons of the year, as babies having had such infections are more susceptible to the more serious intestinal disturbances of the hot weather. He emphasizes the seriousness of the greenish stool, and that it should be an indication to the mother that the child needs medical advice.

Dr. John L. Morse, Boston, in the second paper of this symposium, discusses the dietetic treatment of this disease, and states that the object aimed at is "such an arrangement of the food as will starve the bacteria without starving the baby." In other words, the baby must receive a reasonable amount of nourishment of such a food as will be a poor culture medium for bacteria.

In the beginning of the treatment total abstinence should be ordered, the length of time depending on the condition of the patient; all the babies can stand twenty-four hours without nutriment, most of them standing forty-eight, this provided that they are given a sufficient amount of water. They must receive as much water in twenty-four hours as they normally would get in their food, and the amount of water must be carefully prescribed. If the baby takes the water willingly by the stomach and it is retained, that method of administration is sufficient. If it is not retained, it must be injected into the colon by means of a long tube, and if it is not retained by the colon he advises administration of physiologic salt solution subcutaneously, the amount thus injected being from two to six ounces, depending on the age and size of the infant. It is useless to repeat such an injection until the previous one has been thoroughly absorbed. The administration of water in one of the above methods is absolutely necessary for the life of the patient. The amount of water lost by vomiting and purging if not replaced so depletes the blood as to cause the retention

of toxins, the inhibition of kidney function, and paralysis of the circulation.

The first food given after from twenty-four to forty-eight hours should be a weak, diluted nutriment. Morse believes that it is not generally recognized how little nutrition is contained in barley water, which "as usually prepared contains only about 0.05 per cent. of fat, 0.25 per cent. of proteid and 1.5 per cent. of starch, and thus contains only one-tenth as much nutriment as milk. The white of one egg is equal in nutritive value to only three-fifths of an ounce of milk, while beef juice contains 0.6 per cent. of fat, and 2.9 per cent. of proteid, giving a nutritive value, bulk for bulk, of only one-fourth as great as milk. Broths contain only about 1 per cent. of proteid, and hence have a minimum nutritive value." Therefore, many times a very much diluted milk will be as valuable for nutrition, and may not cause any more disturbance of digestion than do these substitutes.

In selecting a substitute for milk one should endeavor to select one in which the germs present do not readily thrive. While a scientific examination can not often be made, "a clinical rule of some value is that sour stools mean bacteria which thrive on sugars and starches, and foul stools those which thrive on proteids." Morse finds that in these conditions of foul stools the babies do better on starches and sugars than on proteid foods, and he generally selects barley water and milk sugar. When proteids are indicated, the white of egg in the form of albumin water, beef juice, and broth may be used. He cautions that whatever substitute for milk is used, the amount of liquid must be kept up to the required limit, just as during the starvation period.

It is seldom wise to return to a milk diet until the temperature and the movements have become normal. However, after the baby has been sick a week it may be necessary to give some form of modified and pasteurized milk, even if the disease has not stopped. Too much alkali should not be given either medicinally or in the food, as it will retard the formation of the chyme for nutrition and healthy intestinal digestion. In the beginning of the return to a milk diet he finds milk whey often valuable. "It contains about 1 per cent. of proteids and 5 per cent. of sugar." He also has lately found that pasteurized buttermilk is a good initial milk food. Buttermilk contains very little fat, a moderate amount of sugar, a considerable amount of proteids, and lactic acid, and also contains lactic acid bacteria. He has pasteurized this milk, but is not even sure that pasteurization is necessary, as the advantages of buttermilk as a bowel antiseptic have lately been lauded.

When the baby shows no signs of improvement and is gradually failing in spite of all medicinal, dietetic and hygienic treatment, a wet nurse should be considered, as patients have been saved by such natural nutrition.

(*This subject is to be continued.*)

Aneurism in Celiac Axis Superposed on Aneurism of Aorta.—G. Baccelli based this diagnosis—which was confirmed in every point by autopsy—on the facts that the patient was a syphilitic and hard drinker, who had had symptoms, previously, suggesting angina of the abdominal aorta, what Baccelli calls "angina abdominis," similar to angina pectoris. Both ventricles were enlarged, the right less than the left. The stomach was unusually low and the tumor corresponding to the assumed aneurism in the celiac artery rested on the lesser curvature, while no trace could be found of the trunk of the celiac artery. The aneurism in the celiac artery partially rested also on a much older aneurism in the abdominal aorta; the patient succumbed to a rupture between them. Baccelli's report was published in the *Policlinico*.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.

Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.

CLEVELAND, OHIO.

(*Continued from page 1439.*)

VII. HAVE ALL THE WORTHY PRODUCTS BEEN ACCEPTED BY THE COUNCIL?

As I have pointed out in the preceding paper, the policy of enforcing the rules uniformly has obliged the Council to accept some products which its individual members would prefer to see excluded. I have also pointed out that much, if not all of this, can be avoided in the future by making these rules more exacting. I believe that eventually the products already admitted should be re-examined and made to pass the muster of the more stringent standards. This must, however, be done conservatively, gradually, and in a sense tentatively. The manufacturers who have made sacrifices to conform to the original rules of the Council should be granted the benefit of these rules for a reasonable time. Nor should any revolutionary tactics be employed without some investigation as to their ultimate influence on the complex problems which need solution. Finally, before definitely committing itself to any new and far-reaching policies, the Council needs to be assured that these will command not merely the moral but the active support of the medical profession. Without this active support a rule of the Council is valueless.

It is evident, therefore, that improvements should not be expected too rapidly. This, however, is not so important as it might appear, since more exacting standards, such as those suggested by Dr. Brady, can in the meantime be applied by the individual physician. He will not need the Council to tell him that the name "Migrainin" suggests something to his patient; or that "Elixir Buchu Juniper and Potassium Acetate, P. M. & Co." is not distinguished by a high order of originality. If he objects to such practices—as he should—they are by their very nature so conspicuous that he will recognize them at sight, and refrain from using the objectionable products. It is just as well to remember that the Council has always emphasized that it does not *approve* any product—that the admission of an article means nothing more than that the product complies with the rules, and is therefore entitled to the consideration of the profession—whether that consideration is to be favorable or unfavorable is a matter for the decision of the individual practitioner. He—and not the Council—must be the final arbiter of his prescribing.

The question whether every product in the lists of the Council constitutes an advance in therapeutics (the answer would be a very emphatic No!) is really much less important than the converse question, whether every eligible proprietary product can be found in these lists. Whether, in fact, the absence of a product from these lists is presumptive evidence that the product is not entitled to confidence; or, on the other hand, whether there is any truth in the plea that the Council has been able to consider only a small fraction of the worthy products.

To throw some light on these questions, a tabulation was made of the advertisements of proprietary medicines occurring in the January, 1908, numbers of six representative medical journals.[1] Of the nearly two hundred articles thus advertised, approximately two-thirds have been considered by the Council. Of the relatively small number which had not been brought before the Council, fully two-thirds present such obvious violations of the rules that their consideration would be a mere matter of form; the few which remain are so unimportant that I had never heard of them.

1. Boston Med. and Surg. Jour., January 16; Chicago Med. Recorder, January 16; Interstate Med. Jour., January; Medical Record, January 4 and 11; New York Med. Jour., Jan. 4 and 11; Therapeutic Gazette, Jan. 15.

This test, then, seems to show that the Council has indeed well completed its first task of sorting the important products on the market, and the prescriber need not fear that any worthy article of established reputation and value has been omitted. The principal work which the Council has still to do in this direction is to re-examine products which have been refused recognition, but which have since been reformed; and to examine the new products which are constantly being introduced. The consistent and universal refusal to prescribe these products until they conform to the admittedly liberal requirements of the Council will be the most efficacious method of securing their prompt submission or reformation.

The Council, however, does not confine its investigations solely to those preparations submitted voluntarily by manufacturers, but periodically examines the advertising pages of the medical press for articles which seem to require consideration. The impression which has been fostered by some of the opponents of this movement—that the Council is too busy to take up new products—is entirely false. The Council is, and for a long time has been, ready to consider at once any product which may be submitted to it; and to render a verdict in a very few weeks, if the available evidence is clear and decisive.

(To be continued.)

ARHOVIN.

A Proprietary in Process of Evolution.

The German product iodofan was referred to recently[1] and attention called to the discrepancy between the facts, as determined by analysis, and fiction, as represented by the manufacturer's description. Instead of containing nearly 50 per cent. of iodin, as represented, it actually, according to the analysis, has less than 5 per cent.—a remarkable variation! Another preparation of this same firm is arhovin which, unlike iodofan, has been on the American market some time. This product seems to be in an evolutionary state with regard to its composition. According to the descriptive advertising matter sent out a few months ago by the American agents, arhovin at that time was a "thymyl-benzoate of diaphenylamine." This description is eminently scientific—providing it is true. Possibly because such a specific description could be challenged with comparative ease, the "literature" sent out a little later described the product as a "chemical compound of diphenylamine, thymol and benzoic acid." This, of course, is less definite and would be proportionately harder either to prove or disprove. The latest description (or the latest we have seen) gives even greater opportunities for "hedging" should that be necessary. Here we find that arhovin "consists of diphenylamine and thymol-benzoicacid-ethyl-ester in *molecular* proportions." [Italics ours.—ED.] Thus in its evolution from the atomic to the molecular and from the specific to the general, we may confidently expect before long to hear that this much advertised "synthetic" has become a mere mixture.

Firms of the better class are beginning to recognize the unwisdom of jeopardizing their reputations for commercial integrity by standing sponsor for the wildly unscientific statements put out by some of the foreign pharmaceutical manufacturers. This will result in the weeding out of the valueless foreign products and in saner descriptions of those which may become valuable therapeutic agents.

Gowan's Pneumonia Cure.

WALLBURG, N. C., Feb. 19, 1908.

To the Editor:—Please print the analysis of "Gowan's Pneumonia Cure." What effect does this remedy have on pneumonia? J. A.

ANSWER.—The results of an examination of this preparation in the American Medical Association's laboratory follow:

This preparation was not considered of sufficient importance to warrant an exhaustive chemical analysis, as its general character, sufficient for all practical purposes, can be determined by a cursory examination. The "pneumonia cure" as found on the market is a brownish ointment, having an odor of camphor. When applied to the skin, or subjected to a temperature approximately that of the body, it becomes liquid. It is almost completely soluble in chloroform, indicating the absence of any appreciable quantity of water or organic constituents. Tests indicate that the base of the ointment is a fat. From these facts we conclude that "Gowan's Pneumonia Cure" is an ointment composed of some fat having a low melting point and containing camphor, and, if the statements on the label are to be given credence, a small quantity of opium.

This nostrum is recommended by the purveyors as a valuable remedy for local application and it is said to be "antiseptic, nutrient, antipyretic and diaphoretic." It is claimed that it will determine blood to the surface and relieve congestion. The base is said to be emulsified fats which are readily absorbed and the implication is made that the other constituents, also, are absorbed. It probably equals in therapeutic value the old fashioned camphorated oil application. In common with other so-called "cures" sold to the public, its viciousness lies in the false sense of security its use engenders.

1. THE JOURNAL, March 7, 1908, 784.

Correspondence

Comparative Potency of Hyoscin and Scopolamin Hydrobromid in Refraction Work.

REPLY TO DR. REBER'S PAPER.

CLEVELAND, OHIO, April 27, 1908.

To the Editor:—The appearance of Dr. Reber's paper in the last issue of THE JOURNAL (April 25), reminds me that you asked my opinion of this contribution some time last summer. I remember that I protested with some emphasis against its publication until Dr. Reber should have confirmed his conclusions with regard to a few quite elementary precautions. I do not doubt that you had good reasons for disregarding this advice, but since the paper will tend to throw discredit on clinical research, I would ask you also to give space to the comments which I sent you at that time.

TORALD SOLLMANN.

The comments referred to above appeared in the following letter, which was dated July 27, 1907, at Cleveland, Ohio:

The paper of Dr. Reber carries two important lessons: 1. The experience of the practicing physician furnishes a wide opportunity for research in pure science, to one who can see the problems, and has the inclination and knowledge to follow them up. 2. Without this special knowledge, research work is a waste of time, or worse. In this sense Dr. Reber's paper does not deserve publication, for it makes for a low standard in research, and it would be very misleading to anyone unfamiliar with the facts.

Dr. Reber observed that the effects of what is known commercially as hyoscin and scopolamin, in his hands, appeared to be somewhat different, and undertook to confirm this difference by exact experiments. The experiments which he made confirmed his impression, and he concludes therefrom that hyoscin and scopolamin are not identical, physiologically or chemically. This would not by any means be the first instance when the differences in chemical composition have been demonstrated by physiologic means—indeed, the physiologic method is one of the classical means of demonstrating such differences, since its introduction by Pasteur. The principle of Dr. Reber's research is, therefore, correct and his object was most praiseworthy. So far as I can judge, his clinical work was also painstaking; but one becomes a little skeptical when one reads in his first notes (to which he incidentally refers) that the same methods, which he then stated to be "as close an approach to mathematical perfection as we find anywhere in Nature" (*Am. Jour. Pharm.*, 1899, lxxi, 285), and which he now claims prove to him that hyoscin and scopolamin are not identical, that these same methods, I repeat, proved to him, eight years ago, that these two drugs *are* identical. Of course, Dr. Reber may have changed his mind in these

eight years; but one can not help feeling a little insecure in a method which absolutely, definitely and forever proves a thing in 1899, and then just as finally disproves the same thing in 1907. The facts and laws of Nature are generally supposed to be immutable.

Unfortunately, in his work, Dr. Reber ignores every rule which must be observed when it is desired to show the identity or non-identity of two products. The first of these rules should be self-evident, namely, that the products to be compared must be of absolutely known purity; the second rule is that the sources of error involved in the method must not exceed the physiologic differences actually observed.

As to the first rule: Reber contents himself with comparing a single commercial sample labeled "hyoscin," with another commercial sample labeled "scopolamin"! These alkaloids are notoriously very difficult to obtain pure, and I imagine that the Merck Company does not aim to have its medicinal products absolutely pure, since this would raise the cost out of all proportion to the practical gain in medicinal value. But even should it have made this claim of absolute purity for its product (which is inconceivable), no scientist would dream of accepting a manufacturer's assurance when a mooted question of this kind is involved.

The problem which Reber tries to investigate is a strictly chemical one, and so he must conform to the rules of this science, if he wishes his work to be taken seriously. On the contrary, however, he omits even the most elementary precautions, thus entirely invalidating his conclusions from the start. From a strictly scientific standpoint, the correct title of his paper would be, "Comparative Potency of a Commercial Sample Labeled 'Hyoscin,' and Another Commercial Sample Labeled 'Scopolamin,'" etc. In view of this, it is scarcely necessary to continue the criticism beyond pointing out that there are some other slips of technic, each of which might well suffice to explain the observed differences. Dr. Reber apparently did not even supervise the preparation of his solution. He employed the rather inaccurate method of measuring his doses by a "dropper;" accurately graduated pipettes would have been easily obtainable.

Dr. Reber anticipates one criticism; namely, that his conclusion is based on only three experiments. He concludes: "The claim is, therefore, made that the results herein set forth are entitled to consideration and may be accepted as working results until such time as some other worker by a larger series of cases may be in a position to rise and disprove them." To this I would observe that the main desideratum is not a larger series of faulty experiments, but the exercise of a little common care in the experimentation.

I am inflicting this lengthy review on you, not with the object of finding fault with Dr. Reber, but to convince you that this sort of happy-go-lucky style of research should not be published. I have consistently advocated that clinical research is quite as valuable as laboratory research, but it must be research worthy of the name. Such papers as Dr. Reber's do incalculable harm by tending to discredit all clinical data.

I shall not take up your time in discussing the question whether scopolamin and hyoscin are identical, because this question is really not affected by Dr. Reber's paper, and because I have not myself done any work on the subject. I would suggest, however, that before Dr. Reber presumes to criticise the opinions of others he should take the pains to inform himself that there is no longer any controversy as to the identity of caffein and thein, and that he is probably the only man in the world who considers cocain ($C_{17}H_{21}O_4N$), and stovain ($C_{14}H_{21}O_2N$) isomeric! Further, that he should then make a careful study of the masterly paper of Cushny and Peebles on the related subject, "Action of Optical Isomers. II. Hyoscin," *Journal of Physiology*, 1905, xxxii, p. 501, and note the caution which is necessary in such work. If, then, he would repeat his own work with due regard to chemical as well as to clinical accuracy, with samples of scopolamin and hyoscin of known origin and optical rotation, he could produce a piece of research which would be well worth publishing.

TORALD SOLLMANN.

Voting by Ballot.

BUFFALO, N. Y., April 27, 1908.

To the Editor:—Several methods are in vogue for ascertaining the will of an assembly of persons organized for the transaction of business. For choosing its officers, trustees, orators and honorary members the House of Delegates of the American Medical Association has adopted the method of voting by ballot according to the following by-law: "All elections shall be by ballot, and a majority of the votes shall be necessary to elect." (Chapter II, Section 2.) Whenever only one nomination has been made it has been the custom generally to make a motion directing the secretary or some other member to cast one ballot for the nominee. The vote on this motion has been taken by acclamation. This is not a genuine method of election by ballot; it is a method of election by acclamation and violates the by-law quoted above. The vote by acclamation determines the election; the casting of the one ballot is simply a part of the act of recording the acclamatory vote. At the last session of the House of Delegates a proposed by-law was presented to the effect that each voting member should have the privilege of casting his own ballot. It was not adopted. The principal argument made against it was that it would restrict the liberty of the House by preventing it from selecting a method of voting. The same argument would hold with equal force against the adoption of any by-law. The by-law, Section 3 of Chapter VII, relating to the time of election is a restriction of the liberty of the House. All by-laws, in their very nature, are restrictions. Even if an assembly is restricted in its liberties great care should be taken in restricting the liberties of each of its members. Minorities have rights as well as majorities. It has been said that any member can compel each member to cast his own ballot by objecting to the single-ballot method. This is true, but very few persons, even those strongly opposed to the single-ballot method, like to do this. They fear that they will be regarded as obstructionists, that they will be marked for future reference. Most persons prefer to forego their right in this respect rather than subject themselves to the disapprobation and repression of the majority.

When a motion has been made to use the single-ballot method and has been rejected, it has not infrequently happened that several votes have been cast for some one else than the person who was supposed to be the unanimous choice of the assembly. In Roberts' "Rules of Order," which has been adopted by the House of Delegates for its government in the transaction of business, is the following comment on the single-ballot method: "It should always be remembered that this can be done only by unanimous consent, and it is doubtful whether it should ever be allowed."

Not infrequently an argument used in favor of the single-ballot method is, that it consumes much less time than other methods. This may be true, provided the officers to be elected are few and no member objects to the method. If the officers to be elected are many, as is the case in the House of Delegates, some other methods consume much less time. Economy of time is exceedingly important on account of the vast amount of business brought to that body.

The following method is suggested for adoption by the House of Delegates as far superior in many respects to the single-ballot method. Provide for the making of nominations at a sitting held previous to the afternoon of the third day of the session, which is the time designated for the election. (Section 3, Chapter VII, of the By-Laws.) Appoint a committee whose duty shall be to secure and distribute printed ballots. Have a ballot handed to each member as he reaches the assembly room at the opening of the sitting on the afternoon of the third day of the session. Only a few minutes will be required to cast the ballots. While the ballots are being counted by the tellers other important business can be transacted. According to this method less time by fully one hour will be required for the election than by the single-ballot method.

The following are some of the advantages in favor of the method above outlined:

It provides for a genuine ballot. It permits each voting

member the privilege of casting his own ballot. It encourages each member to cast a free and independent ballot. By this method the person elected may know how he stands with his constituency—how many votes are for and how many are against him. This method saves a vast amount of time which can be well used for the transaction of important business.

It is my ardent hope that at its coming session the House of Delegates will provide for this method as a whole or with slight modification, for the election of its officers. I am confident that after a fair trial it will be approved as much superior to the method heretofore adopted.

J. W. GROSVENOR.

Medical Education and State Boards of Registration

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.

Fourth Annual Conference, held at Chicago, April 13, 1908.

The Chairman, DR. ARTHUR DEAN BEVAN, Chicago, presiding.

Besides the members of the Council, 88 delegates were present, representing 21 state examining boards, 21 state medical societies, 3 departments of the government services, 2 confederations of examining boards, 2 college associations and 2 national medical associations, as well as 30 medical and liberal arts colleges.

DELEGATES.

FROM STATES AND STATE BOARDS: *Alabama*, E. O. Williamson, Gurley; *Colorado*, S. D. Van Meter, Denver; *Illinois*, George W. Webster, Chicago; J. A. Egan, Springfield; *Indiana*, J. C. Webster, Lafayette; W. A. Spurgeon, Muncie; *Iowa*, Louis A. Thomas, Des Moines; *Kentucky*, A. T. McCormack, Bowling Green; *Maryland*, J. McPherson Scott, Hagerstown; *Michigan*, B. D. Harison, Detroit; A. W. Alvord, Battle Creek; *Missouri*, Robert H. Goodier, Hannibal; Frank J. Lutz, St. Louis; *New Jersey*, J. W. Bennett, Long Branch; *New York*, William Warren Potter, Buffalo; *Ohio*, A. Ravogli, Cincinnati; H. E. Beebe, Sidney; *Oregon*, R. C. Coffey, Portland; *Rhode Island*, James O'Hare, Providence; *South Dakota*, F. S. Howe, Deadwood; *Tennessee*, James K. Blackburn, Pulaski; *Texas*, J. J. Dial, Sulphur Springs; *Vermont*, W. Scott Nay, Underhill; *Virginia*, Richard H. Whitehead, Charlottesville; *West Virginia*, John L. Dickey, Wheeling; *Wisconsin*, L. F. Bennett, Beloit; J. V. Stevens, Jefferson; W. T. Sarles, Sparta.

FROM STATE MEDICAL SOCIETIES: *California*, F. Dudley Tait, San Francisco; *Colorado*, W. H. Harlow, Boulder; *District of Columbia*, W. F. R. Phillips, Washington; *Illinois*, Frank P. Norbury and Carl E. Black, Jacksonville; *Indiana*, H.C. Sharp, Jeffersonville; *Iowa*, Charles J. Saunders, Fort Dodge; Clyde A. Boice, Washington; James R. Guthrie, Dubuque; *Kansas*, F. M. Daily, Beloit; *Kentucky*, W. H. Wathen, Louisville; *Maine*, Frederic H. Gerrish, Brunswick; *Maryland*, Charles F. Bevan, Baltimore; *Massachusetts*, Horace D. Arnold, Boston; *Minnesota*, F. F. Wesbrook, Minneapolis; *Missouri*, N. B. Carson, St. Louis; *Nebraska*, D. C. Bryant, Omaha; *New Mexico*, G. W. Harrison, Albuquerque; *New York*, C. Howard Travell, Troy; *Ohio*, R. H. Grube, Xenia; *Oklahoma*, B. J. Vance, Checotah; *Pennsylvania*, Alex. R. Craig, Philadelphia; *South Dakota*, Stephen Olney, Sioux Falls; *Virginia*, Charles H. Hazen, Richmond; *Washington*, J. G. Cunningham, Spokane; *Wisconsin*, Louis R. Head, Madison.

FROM OTHER ORGANIZATIONS: *United States Army*, Assistant Surgeon General, P. F. Harvey, Chicago; *United States Navy*, Assistant Surgeon A. B. Hayward, Chicago; *United States Public Health and Marine-Hospital Service*, Surgeon G. B. Young, Chicago; *Association of American Medical Colleges*, Fred C. Zapffe, Chicago; *American Academy of Medicine*, Charles S. Sheldon, Madison, Wis.; *National Confederation of Examining Boards*, Murray Galt Motter, Washington, D. C.; *American Confederation of Examining Boards*, W. A. Spurgeon, Muncie, Ind.; *American Medical Association*, Herbert L. Burrell, Boston, Mass.; Frederick R. Green, Chicago; *National Eclectic Medical Association*, E. B. Shewman, Waymansville, Ind

GUESTS: Prof. A. H. F. Barbour, University of Edinburgh; President Charles W. Eliot, Harvard University; President George E. MacLean, State University of Iowa; George H. Kress, University of Southern California, College of Medicine; Ludvig Hektoen, Harry Gideon Wells, John Milton Dodson and F. S. Churchill, Rush Medical College, Chicago; Winfield S. Hall and John H. Long, Northwestern University Medical School, Chicago; J. N. Roe, Chicago College of Medicine and Surgery; Burton D. Myers, University of Indiana, School of Medicine, Bloomington; W. L. Bierring, University of Iowa, College of Medicine, Iowa City; George H. Hoxie, University of Kansas, School of Medicine, Kansas City; Isadore Dyer, Tulane University Medical Department, New Orleans, John F. Morse and E. L. Eggleston, American Medical Missionary College, Battle Creek, Mich.; Samuel W. Lambert, College of Physicians and Surgeons, New York City; J. L. Heffron, Syracuse University Medical Department, Syracuse, N. Y.; F. C. Waite, Western Reserve University, Medical Department, Cleveland, Ohio; A. H. Brundage, Milwaukee Medical College; Charles R. Bardeen, University of Wisconsin, College of Medicine, Madison.

The conference was called to order at 10 a. m., by the chairman, Dr. Arthur Dean Bevan, who delivered the following address:

CHAIRMAN'S ADDRESS.

Gentlemen, Delegates from the state licensing bodies, from the state medical societies, from the National Institute of Homeopathy, from the National Eclectic Medical Association, from the medical college associations, from the confederations and associations of state licensing boards, from the United States Army and Navy Medical Corps and the Public Health and Marine-Hospital Service, from the schools of liberal arts, officers of the American Medical Association and invited guests.

The Council on Medical Education of the American Medical Association has invited you to this fourth annual conference to discuss the subject of medical education in America. We welcome you in the name of the American Medical Association and ask for your advice and cooperation in the effort to elevate the standards of medical education in this country. It has become apparent that the three annual conferences which have preceded this have been productive of much good.

This body of delegates, called together from all parts of the union and representing the agents which are most interested and most influential in medical education, has no legal powers. We are not even an organized body. We are an informal conference, met to discuss fully and freely the existing conditions of American medical education, and to suggest plans and methods which may lead to improved standards.

It is the desire to have this conference open to all who are interested in modern, scientific medicine, irrespective of schools of practice.

The value of such a conference lies in the interchange of ideas between men representing the various states, associations, schools and services, and the wide publicity which can be given to the views of these men who have given much time and thought to the problems of medical education.

OBJECT OF THE COUNCIL.

The Council on Medical Education of the American Medical Association is the instrument of the association in matters pertaining to medical education. Its functions are those of a national bureau of information. It seeks to collect the facts in regard to medical education in this country and abroad and to give publicity to these facts.

The work of the council was made possible by the reorganization of the American Medical Association. The new constitution gave considerable permanence to the council, established permanent headquarters in the building of the American Medical Association, and provided a permanent secretary and clerical force sufficient to carry on the work.

THE FIRST THREE CONFERENCES.

At the first annual conference the important questions discussed were those of preliminary education, medical curriculum, and the relation of the medical school to schools of lib-

eral arts. As a result of this conference the ideal and recommended standards were offered and adopted by the American Medical Association at its Portland session. At the second annual conference a report of the standing of medical schools, based on the percentage of failures of their graduates before state boards, was presented, the relation of the state boards and state medical societies to medical education was discussed and the discussion of preliminary education and medical curriculum was continued. At the conference last year a report was given showing the conditions existing in the 161 medical colleges of this country, based on personal inspection. On the basis of this inspection 82 schools were found to be of acceptable grade and 32 were regarded as worthless. leaving 47 which were regarded as susceptible of improvements which would bring them into the acceptable class. The state boards were notified of these findings.

A further report of the standing of the schools based on the percentage of failures before the state boards was made last year, showing a very considerable improvement and proving the value of the publicity of these facts.

Special reports of committees on admission to advanced standing of college graduates and on preliminary medical education were made and the subjects of inspection of preliminary credentials by an officer of the state examining board and methods of conducting state board examinations were discussed.

SUGGESTIONS FROM THIS YEAR'S WORK.

During the last year the work of the council has been continued along the same lines of attempting to ascertain and collect the facts in regard to medical education and present these to the state boards and the profession. With the gradual accumulation of facts in regard to existing conditions of medical education both here and abroad, the plan of campaign which must be carried on to place American medical education on an acceptable and fairly uniform plane throughout the country, becomes clearer. It would seem to be about as follows:

SUGGESTIONS FOR MEDICAL PRACTICE ACTS.

The basic principles of a model medical practice act should be agreed on and adopted in each state. These basic principles should include: (*a*) A single licensing board made up of members irrespective of schools, the only requirement being that the men should be qualified practitioners of modern scientific medicine. (*b*) This board should have the power to determine the matter of preliminary education and medical curriculum and should have the power to refuse recognition to disreputable medical schools. (*c*) The preliminary education should be a standard four-year high school education to which should be added in each state as soon as conditions warrant a thorough training in physics, chemistry and biology, including laboratory work. (*d*) A four-year medical curriculum should be required, each annual session consisting of thirty weeks, thirty hours a week, the first two years to be spent in well-equipped laboratories of anatomy, physiology, bacteriology, pathology and pharmacology, officered by trained teachers; the second two years devoted to medicine, surgery, obstetrics and the specialties, largely in clinical work in well-equipped laboratories, dispensaries and hospitals. (*e*) When conditions warrant there should be added to this, as has already been done in Germany, a compulsory year as a hospital interne. This last requirement will probably come without special urging, since in our better schools the majority of the graduates even to-day are convinced of the necessity of this hospital year and strive eagerly to secure it. (*f*) The state boards of each state should inspect its schools and refuse recognition to those which are not teaching scientific medicine. This should be done in the interests of the public, since there are a number of medical schools in the United States not properly equipped to teach modern scientific medicine. We have almost as many medical schools in this country as in all the rest of the world combined. We have about 161; the rest of the world, 174. Many of our American schools are disreputable and should not be recognized by state boards.

A SINGLE ASSOCIATION OF STATE BOARDS.

Then there should be a single association of state licensing boards organized, which should consist of delegates who are active members of state boards representing every state in the union; such an association could be of enormous service in handling such matters as the withholding of recognition from disreputable schools, reciprocity, etc.

In order to secure better conditions there should be an active, earnest cooperation in each state between the state licensing board and the organized medical profession; and the profession must see to it that the necessary laws are secured and that efficient men are appointed on the state board to see that they are enforced.

CONDITIONS IN EACH STATE.

With such a plan of campaign in mind and with our present knowledge of existing conditions, let us rapidly review the contions in the various states.

Let us do this from the standpoint that:

1. There should be a single board.
2. There should be provision for reciprocity, provided that this is properly safeguarded and administered.
3. The board should have the power to inspect the medical colleges and refuse recognition to such as are disreputable.
4. That at least a four-year high school education should be required.
5. A degree should be required before the candidate can take a state board examination.
6. Let us note the number of medical colleges in each state, acceptable and non-acceptable.

This will show what changes are desirable as far as medical laws are concerned and what number of medical colleges should be refused recognition in order to place the entire country on a fairly aceptable basis.

ALABAMA.—This state does not require a candidate for license to be a graduate of a medical college: it has no provision for preliminary education and it has no power to refuse recognition to disreputable medical colleges. It has two medical colleges, neither of which is as strong as could be desired. It would be better if there was a single strong school supported by the state and the profession of the state.

ARIZONA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has only a limited authority to refuse recognition to disreputable schools, and has no provision for preliminary education.

ARKANSAS.—The state requires graduation from a medical college, has separate boards of medical examiners, has no provision for reciprocity, has no provision in law for preliminary education, and has no authority to refuse recognition to disreputable schools. There are two medical schools, neither being entirely satisfactory. There should be one strong medical school supported by the state and the profession of the state.

CALIFORNIA.—This state requires graduation of all candidates for licensure, has a single board of medical examiners, has no provision for reciprocity, has but limited authority to refuse recognition to disreputable schools, requires good preliminary education, and has eight medical schools, five aceptable and three which are unsatisfactory.

COLORADO.—This state does not require graduation of all candidates for license, has a single board of medical examiners, has provision for reciprocity without a retaliatory clause, has power to refuse recognition to disreputable schools, requires a four-year high school education, and after 1912 will require one year in physics, chemistry and biology. It has two medical schools which should be merged on the plan recently adopted in Indiana. There should be a strong medical department of the State University offering the first two years at Boulder and the complete four years at Denver. This arrangement is similar to that adopted by Cornell University and will be referred to as the Cornell plan.

CONNECTICUT.—This state requires graduation of all applicants for license, has separate examining boards, has provision for reciprocity, has power to refuse recognition to disreputable medical schools, and requires hereafter a four-year high school plus one year of liberal arts' work in physics. chemistry and biology. It has one medical school of good standing.

DELAWARE.—This state requires graduation of all applicants for license, has separate medical examining boards, has pro-

vision for reciprocity without a retaliatory clause, has power to refuse recognition to disreputable schools, and requires for preliminary education a standard four-year high school course. It has no medical colleges.

DISTRICT OF COLUMBIA.—The District of Columbia requires graduation of all applicants for license, has separate boards of medical examiners, has provision for reciprocity, has only a limited authority to refuse recognition to disreputable schools, and has no requirement as to preliminary education. It has three medical schools of fair grade.

FLORIDA.—This state requires graduation of all applicants for license, has separate medical examining boards, has no provision for reciprocity, has no power to refuse recognition to disreputable schools, has no provision for preliminary education, and has no medical colleges.

GEORGIA.—This state requires graduation of all applicants for license, has separate examining boards, has provision for reciprocity, has but limited authority to refuse recognition to disreputable schools, and has no provision for preliminary education. It has five medical schools, three of which are of fair grade and two of poor standing. A merger of the three stronger schools has already been rumored. If, out of these, a single strong school, supported by the state and the medical profession, could be formed, it would be highly desirable.

IDAHO.—This state requires graduation of all candidates for license, has a single board of medical examiners, has no provision for reciprocity, has authority to refuse recognition to disreputable schools, and does not as yet require a four-year high school education. It has no medical colleges.

ILLINOIS.—This state requires graduation of all applicants for license, has a single examining board, has provision for reciprocity, has power to refuse recognition to disreputable schools, and requires a four-year high school course as preliminary education. It has more medical colleges than any other state in the Union; more than Austria or France, and almost as many as the two countries combined. Of the 13 medical colleges in Illinois, five are acceptable, two more, after making improvements, may be regarded as acceptable and six are of low grade and non-acceptable. The state board has recently withdrawn recognition from five of these schools.

INDIANA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a standard high school education for admission to medical colleges. Indiana until recently had several medical schools; these were gradually reduced by merger and finally, to the great credit of the profession of the state, all of the schools have merged into the medical department of Indiana University. There are, in addition, two unsatisfactory schools, from one of which the state board has recently withdrawn recognition.

IOWA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools and requires a four-year high school education for admission to medical colleges. It has five medical colleges, three of acceptable grade and two of doubtful standing.

KANSAS.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, and the board has power to refuse recognition to disreputable schools.

It has not fixed a four-year high school course as the minimum requirement of preliminary education. It has three schools, two acceptable and one non-acceptable.

KENTUCKY.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools and medical colleges. Until recently it had a large number of schools which has been reduced by mergers. Recently a movement has been discussed of merging all the regular schools into a medical department of the State University. Such a merger is highly desirable. There are also two schools of poor grade in the state.

LOUISIANA.—This state requires graduation of all applicants for license, has separate boards of medical examiners, and has no provision for reciprocity. The board has full power to refuse recognition to disreputable schools, but the practice act makes no provision for preliminary education. It has two medical colleges, one of which is among the strong schools of the South. The other is a colored school, which is struggling to reach an acceptable position.

MAINE.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has one medical college, which is in the acceptable class.

MARYLAND.—This state requires graduation of all applicants for license, has separate boards of medical examiners, has provision for reciprocity, has no authority to refuse recognition to disreputable schools and does not require a four-year high school course. It has eight medical colleges, four of which are acceptable and four not acceptable.

MASSACHUSETTS.—Singularly enough, Massachusetts and Rhode Island are the only Eastern states which do not require graduation of all applicants for license. This state has a single board of medical examiners, has no provision for reciprocity, has no authority to refuse recognition to disreputable schools and has no requirement of preliminary education. It has four colleges, three of which are acceptable and one not acceptable.

MICHIGAN.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has five schools. The state board refused recognition to one college lately which has gone out of existence. Of the five schools remaining, four are acceptable and one not acceptable.

MINNESOTA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires for admission to medical colleges a four-year high school course plus two years of work in a college of liberal arts, including physics, chemistry and biology. It now has but one medical school connected with the University of Minnesota with regular and homeopathic departments.

MISSISSIPPI.—This state does not require graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, has no authority to refuse recognition to disreputable schools, and has no provisions for preliminary education. It has two medical schools, one of which is acceptable and one not acceptable.

MISSOURI.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has eleven schools, four of which are acceptable and seven non-acceptable. Barnes Medical College is to become a part of the University of Missouri after the close of the present session.

MONTANA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has no provision for reciprocity, and has the power to refuse recognition to disreputable medical schools, but as yet has not fixed a four-year high school education as its minimum standard of preliminary education. It has no medical colleges.

NEBRASKA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has four schools, two of which are acceptable and two non-acceptable.

NEVADA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has but limited authority to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has no medical schools.

NEW HAMPSHIRE.—This state requires graduation of all applicants for license, has separate boards of medical examin-

ers, has provision for reciprocity, has the power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. It has one medical school, which is in the acceptable class.

NEW JERSEY.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity without a retaliatory clause, has the power to refuse recognition to disreputable medical schools, and requires a four-year high school education for admission to medical colleges. It has no medical schools.

NEW MEXICO.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, has the power to refuse recognition to disreputable schools, and requires a four-year high school education for admission to medical colleges. There are no medical schools in the state.

NEW YORK.—This state requires graduation of all applicants for license, has now a single board of medical examiners, has provision for reciprocity, has authority to refuse recognition to disreputable medical schools, and requires a four-year high school education for admission to medical schools. Before matriculation in any medical college in the state the student must secure from the Board of Regents a medical student's matriculation certificate. This state has ten medical colleges, eight of which are acceptable and two not acceptable.

NORTH CAROLINA.—This state requires graduation of all applicants for license, has a single board of medical examiners, has provision for reciprocity, and has only limited authority to refuse recognition to disreputable schools, but has not yet fixed a four-year high school education as its minimum standard of preliminary education. It has four medical schools, two of which are acceptable and two non-acceptable.

(To be continued.)

Book Notice

A MIND THAT FOUND ITSELF, AN AUTOBIOGRAPHY. By Clifford Whittingham Beers. Cloth. Pp. 363. Price $1.50. New York: Longmans, Green & Co., 1908.

We have read many books that were real or alleged chronicles of insanity and asylum experiences, but none like this—a faithful and graphic record by the patient himself of the inner workings of his own disordered mind, and also of the outward circumstances and places of abode in which he dwelt while alienated from himself.

The book is one that challenges attention. In the first place, it is a literary performance of a very high order. It is equally remarkable that it should have been written so well, and that it should have been written at all. Again, it is an exploration of human life in regions strange and unfamiliar, yet fascinating—near at hand, yet far away. It depicts, with vivid lights and shadows a malady whose sufferings and sorrows are the deepest that life can bring, and which appeals strongly to the universal mind and heart in its need for every means and measure of relief and help in any way attainable.

The author's story is that of a young man of neurotic temperament who, being nervously exhausted after graduating at Yale, imprudently went forthwith into business. A brother dying of epilepsy, the author, in his morbid state, himself becomes possessed with the irresistible idea that he, too, is hopelessly epileptic. He goes through the agony of what he takes to be epileptic seizures, not knowing that had they been really epileptic he would almost certainly have been wholly unconscious. The condition as here described might be taken for one of psychasthenia, but evidently a deeper-seated manic depressive cycle is in process of evolution. There is no psychasthenia about this young man, as the sequel shows.

In his desperation the author makes a suicidal attempt by dropping from a window. This attempt is followed, possibly in consequence of the traumatic shock, by a complete cessation of the delusion about epilepsy, but there is now evolved, along with hallucinations of sight, hearing and all the senses, a whole series of fairly systematized delusions of criminal self-accusation—poison, espionage, etc.; further, a most distressing complication is present in the fractures of foot and ankle bones resulting from the fall.

The patient is placed successively in a private sanitarium, at a private home under the care of a nurse, in an endowed retreat, and finally in a state hospital. He cures himself of his persecutory delusions by the secret aid of a fellow-patient, who helps him to smuggle out a letter, which, on being brought back by his brother, convinces him that that brother is not a detective in disguise, but is actually his brother. The depression, the delusions, and the hallucinations now fade, and the maniacal phase supervenes with extraordinary expansiveness and combativeness. He is receiving treatment after the routine fashion, but does not fit into any of the usual moulds, and the process of "trimming" to make him fit, only intensifies his misery and rebelliousness.

The author presents a graphic picture of treatment, not merely tactless, but positively harsh and brutal; and it is impossible to read of his courage, resourcefulness, persistency and the skill with which he meets the ordeals that the combined circumstances of his grandiose mental state and the unfeeling and unintelligent treatment bring about, without being deeply stirred by indignation and compassion. Suffice it to say, that he emerges victorious from his appalling experiences, regains, if not absolutely, at least with relative completeness, his mental force, and devotes his energies to the preparation of his unparalleled story and to labors calculated to assist in bringing about a state of affairs in the care of the insane better than that encountered by himself—a state of affairs which, it must be admitted, is duplicated to a great extent in a large majority of our public institutions for the insane.

The timely publication of this work, it is to be hoped, will arouse the public to a realization of existing conditions in our public institutions and to a demand for their amelioration. If it can do that, it will render a service that the medical profession has long endeavored to effect, but with the only too common result that all its remonstrances and warnings fall on deaf ears.

Medical Economics

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

Secretaries of all county societies which have adopted the postgraduate course of study who have not notified the director of such action, or whose societies have not been reported in THE JOURNAL, are requested to write at once to Dr. Blackburn, giving the desired information. Dr. Blackburn wishes to make a complete report on postgraduate work to the House of Delegates at the Chicago session.

Eighth Month.

THIRD WEEKLY MEETING.

Intestinal Pathology.

Portion of intestine involved. 1. Stage of hyperemia. Changes in mucous membrane and lymphoid structures. 2. Medullary infiltration. Peyer's patches, location, shape, size. Solitary follicles. 3. Necrosis and ulceration. Cause of necrosis. Microscopic changes. "Typhoid ulcer." Sloughs. Hemorrhage. Number of ulcers. Perforation. 4. Cicatrization. Rate of healing. Tissues regenerated. Relation of each stage of clinical course. Changes in other portions of bowel. Mesenteric glands. Glands involved. Relation to intestinal changes. Color, shape, size. Microscopic changes. Terminations.

Liver: Macroscopic appearances. Microscopic changes. Changes in bile. Changes in gall bladder and bile passages.

General Pathology.

Muscles: Macroscopic appearances. Microscopic changes. Varieties of degeneration.

Bones: Periostitis and osteomyelitis. Organisms found. Changes in bone-marrow. Arthritides.

Heart and blood vessels: Myocardium. Parenchymatous changes. Interstitial changes. Endocardial and pericardial changes. Vascular changes. Arteritis, thrombosis, gangrene. Phlebitis, femoral.

Spleen: Gross changes in relation to clinical course. Microscopic changes. Presence of bacilli.

Kidney: Usual gross and microscopic changes. Typhoid nephritis.

Respiratory Organs: Ulcer of larynx. Changes in bronchial mucous membrane and glands. Hypostatic congestion. Lobar pneumonia, organisms present.

Nervous System: Intensity of anatomic changes, relation to symptoms. Changes in meninges. Cerebral changes.

Association News

Additional Hotels.

In addition to the hotels already mentioned (THE JOURNAL, May 2, page 1468), are the following:

CHICAGO BEACH HOTEL, Fifty-first Boulevard and the Lake Shore; 450 rooms; can take 300; rates, American plan, $3.50 up for one person; $6 up for two. European plan, $2 up for one person; $3.00 up for two.

Detailed information concerning the following hotels is not at hand, but they are all of the better class:

ALEXANDRIA HOTEL, 70 Rush Street.
DREXEL ARMS HOTEL, Oakwood and Drexel Boulevards.
HYDE PARK HOTEL, Fifty-first Street and Lake Avenue.
JULIEN HOTEL, Sixty-third Street and Stewart Avenue.
MORRISON HOTEL, Madison and Clark Streets.
NEWBURY HOTEL, 225 Dearborn Avenue.
ONTARIO HOTEL, North State and Ontario Streets.
PLAZA HOTEL, North Avenue and Clark Street.
VENDOME HOTEL, Sixty-second Street and Monroe Avenue.
YORKSHIRE HOTEL, 1837 Michigan Avenue.

NEW MEMBERS.

List of new members of the American Medical Association for the month of April, 1908:

ALABAMA.

Brothers, T. J., Anniston.

ARIZONA.

Bacon, J. E., Tombstone.

ARKANSAS.

Reich, J. L., Everton.

CALIFORNIA.

Brown, N. N., Bakersfield.
Condit, J. C., Healdsburg.
Hopkins, M. F., San Jose.
Howard, Edward, San Diego.
Kellogg, W. H., San Francisco.
Lum, W. T., Alameda.
Matsuda, M., San Francisco.
McClenahan, H. C., Belmont.
Meyer, Henry, San Francisco.
Milliken, A. A., Fort Jones.
Millspaugh, W. P., Los Angeles.
Newmark, Leo, San Francisco.
Painter, G. L., San Francisco.
Simpson, J. A., San Francisco.
Stowell, J. M., San Francisco.
West, S. V., Bakersfield.
Wiel, H. I., San Francisco.

COLORADO.

Ayers, V. B., Fairplay.
Burt, C. I., Denver.
Harvey, H. H., Trinidad.
Heath, H., Denver.
Mayhew, D. P., Colorado Springs.
Sedwick, W. A., Denver.

CONNECTICUT.

Owens, W. T., Hartford.
Smith, D., Bridgeport.
Winne, W. N., New Haven.

DELAWARE.

Davis, W. F., Dover.

DISTRICT OF COLUMBIA.

Anderson, C. L. G., Washington.
Heinecke, G. B., Washington.
Lawson, H. W., Washington.
Lyon, Martha M. B., Washington.

GEORGIA.

Alsobrook, J. S., Ringgold.
Anthony, E. R., Griffin.
Curtis, C. M., College Park.
Jones, E. G., Atlanta.
Lee, Lawrence, Savannah.
Matthews, W. J., Rome.

ILLINOIS.

Adles, Max., Du Quoin.
Alderson, A. S., Yorkville.
Alexander, J. W., Oakland.
Allport, W. H., Chicago.
Alvis, E. C., Kell.
Alvis, W. H., Benton.
Avery, E. K., Chicago.
Bagley, H. P., Chicago.
Baker, Carl, Herrin.
Ball, R. M. C., Monmouth.
Ballard, H. F., Cullom.
Barton, L. E., Malta.
Bath, T. W., Bloomington.
Beard, C. G., Sterling.
Becker, Louis, Knoxville.
Beecher, C. E., Gilson.
Belfield, W. T., Chicago.
Black, R. A., Chicago.
Blake, J. M., Chicago.
Bottom, E. H., E. St. Louis.
Bowman, L. M., Alton.
Bozarth, J. W., Mt. Pulaski.
Brannan, C. S., Albion.
Brown, A. C. W., Chicago.
Brown, Columbus, Herrin.
Browning, H. D., Moline.
Bryan, J. L., Xenia.
Buhlig, W. H., Chicago.
Burroughs, L. G., Collinsville.
Burton, R. C., Savanna.
Buswell, C. A., Chicago.
Campbell, H. C., Jacksonville.
Caron, Walter, Chicago.
Cavanaugh, J. A., Chicago.
Champlin, S. H., Chicago.
Chrisman, W. D., Bradford.
Clancey, J. H., Naperville.
Clinton, Bertha L., Paris.
Clyne, J. A., Joliet.
Coffin, C. A., Kewanee.
Cole, A. V., Chicago.
Cole, John, Williamsfield.
Conley, D. S., Streator.
Cooper, Earl, Augusta.
Cowan, J. E., Galesburg.
Crist, C. H., Danville.
Cromwell, P. I., Effingham.
Cubbins, W. R., Chicago.
Damiani, Joseph, Chicago.
Darmer, G. A., Woodstock.
Deal, D. W., Springfield.
Dearborn, C. B., Mt. Sterling.
Davis, G. G., Chicago.
Davis, R. A., Chicago.
Dice, H. F. Ridge Farm.
Dobson, J. W., Bloomington.
Dondanville, M. S., Rock Island.
Douglass, S. F., Renault.
Driskell, C. R., Farmersville.
Earel, A. M., Hoopeston.
Edmonson, G. S., Clinton.
Fenlon, J. H., Bloomington.
Floreth, G. A., Mt. Olive.
Foerter, A. J., Peoria.
Franklin, J. H., Spring Valley.
Fullenwelder, R. C., La Salle.
Gaebe, O. C., Addieville.
Gardner, N. B., Loami.
Garlington, J. M., Ottawa.
Grassau, Andrew, Malta.
Graybeal, James, Chicago.
Green, Earl, Mt. Vernon.
Halbert, W. A., Springfield.
Hale, J. A., Alto Pass.
Hamilton, Howard, Bethany.
Hammers, L. J., Lexington.
Haney, J. M., Centralia.
Hanson, Henry, E. St. Louis.
Hatch, W. G., Rockford.
Hatfield, R. L., Danville.
Haumesser, G. H., Shumway.
Havens, A., New Philadelphia.
Hennenway, H. B., Evanston.
Hicks, S. J., Ivesdale.
Hilgenberg, J. F., Pesotum.
Hill, F. A., Chicago.
Hinman, W. T., Moline.
Hirsch, J. A., Edwardsville.
Holin, J., Cowden.
Holmes, J. B., Macomb.
Hoornbeck, N. B., Youngstown.
Howard, Florence A., Warsaw.
Hoyne, A. L., Chicago.
Hubly, C. C., New Windsor.
Hundley, J. B., Danville.
Ingles, J. A., Hoopeston.
Isham, G. S., Chicago.
Jessee, R. L., Philo.
Johnson, G. F., E. Moline.
Jones, J. T., Salem.
Jones, Solomon, Danville.
Kimball, F. H., Rockford.
Klaus, C. F., Chicago.
Kowsky, J. F., Chicago.
Kraemer, J. N., Marissa.
Kreider, S. G., Lena.
Lacy, L. S., Pittsfield.
Laswell, S. L., Alma.
Lawry, C. C., Earlville.
Leitzell, C. P., Dakota.
Lewis, J. F., Depue.
Long, H. W., Elmwood.
Long, J. H., E. Moline.
Luken, M. H., Chicago.
MacChesney, W. N., Chl. Heights.
Marlow, J. T., Tamaroa.
Martin, J. A., Palestine.
McCullough, J. Y., Casey.
McEachern, D. B. Chicago.
Mead, D. O., Pinckneyville.
Melov, J. E., Lincoln.
Merwin, E. G., Highland.
Meyer, E. F., Chicago.
Millican, J. A., Chicago.
Mills, P., Chicago.
Morrison, W. S., Minonk.
Morton, J. S., Vernon.
Mosher, G. W., Chicago.
Moyer, M. L., Hillsboro.
Naffz, E. S., Chicago.
Nelles, J. M., Canton.
Nelson, C. S., Springfield.
Nelson, J. A., Chicago.
Nichols, F. C., El Paso.
Obermeyer, A. E., Arcadia.
Ormsby, O. B., Murphysboro.
Ormsby, O. S., Chicago.
Orr, H. M., La Salle.
Orr, L. E., Hull.
Parsons, F. H. B., Morgan Park.
Peckardt, Kate E., Chicago.
Perrin, J. H., Latham.
Phemister, D. B., La Grange.
Pirnat, F. A., Chicago.
Poorman, C. W., Oak Park.
Price, E. M., Astoria.
Pridmore, G. W., Clay City.
Priest, T. W., Williamsville.
Roberson, J. W., Coulterville.
Ream, F. K., Chicago.
Roe, T. H. S., Pinckneyville.
Roler, A. H., Chicago.
Rydin, C. G. S., Chicago.
Sanderson, C. R., Waynesville.
Sandstedt, G. E., Chicago.
Schwer, O. J., Dongola.
Scott, W. F., Maywood.
Seger, D. B., Morrison.
Shockey, G. C., Melrose Park.
Shronts, C. F., Momence.
Silverthorn, F. R., Chicago.
Sims, J. M., Collinsville.
Smith, H. W., Roodhouse.
Smith, N. P., Paris.
Snyder, J. F., Monroe Center.
Souders, J. C., Rock Island.
Stebbings, A. L., Marseilles.
Steele, A. D., Chester.
Stephens, O. Z., Strasburg.
Stevens, S. L., Dalton City.
Sullivan, E. P., Morrison.
Tannus, T. F., Bloomington.
Tennery, W. R., Danville.
Thurmon, F. M., Pearl.
Timpany, J. S., Chicago.
Torey, E. J., Freeport.
Wakefield, W. B., Heyworth.
Webster, R. W., Chicago.
Wells, W. H., Monmouth.
West, J. C., Chicago.
Westerlund, J. E. Cambridge.
Wheeler, F. E., Auburn.
Whitehead, E. I., Victoria.
Wiebusch, A. C. C., Cora.
Wiener, A. C., Chicago.
Wilcox, F. W., Minonk.
Williams, R. W., Galva.
Woodward, C. E., Decatur.
Wyatt, W. W. Peoria.
Yudelson, A. B., Chicago.
Zorger, W. H., Champaign.

INDIANA.

Blair, J. S., Lynn.
Clouse, Bertha A., Columbus.
Cook, E. C., Madison.
Foust, P. G., Sante Fe.
Graystone, W. S., Marion.
Harris, C. M., Bourbon.
Jennings, Harriett B., Elkhart.
Kirk, E. W., Veedersburg.
Knapp, H. C., Hintingburg.
Leeds, F. R., Michigan City.
McBride, E. C., Terre Haute.
Miller, H. M., South Bend.
Schneider, A. J., Indianapolis.
Schurtz, E. K., Waterloo.
Shoemaker, S. A., Poneto.

IOWA.

Decker, G. E., Davenport.
Habenicht, H. A., Des Moines.
Haller, J. T., Davenport.
Heald, C. L., South English.
Jenkins, Hugh, Preston.
Jones, H. J., North English.
Juen, J. A., Ossian.
Junger, E. C., Soldier.
Kearney, C. A., Farley.
Kerr, William, Randolph.
Laidley, W. G., Pilot Mound.
Lehan, J. W., Dunlap.
McGavren, C. W., Mo. Valley.
Pahl, E. W., Cantril.
Patty, L. G., Carroll.
Peebler, Ora F., Dayton.
Reyner, Franklin, Epworth.
Robinson, J. B., Mt. Vernon.
Rogers, H. C., Primghar.
Rust, E. A., Webb.
Sherlock, Margaret, Sigourney.
Stewart, A. P., Rembrandt.
Strobel, A. H., Davenport.
Tillmont, C. P., Centerville.
Woods, W. P., Evansville.

KANSAS.

Blue, R. B., Wichita.
Davis, J. N., Independence.
De Long, A. H., Moran.
Dutton, S. W., McCracken.
Harvey, L. S., Dunlap.
Hatch, B. P., Beattie.
Logsdon, W. T., Wichita.
Martin, C. F., Winchester.
Muir, D. T., Alden.
O'Brien, D. S., Beloit.
Stough, D. F., Stockton.
Stroup, H. A., Winona.
Sudler, M. T., Laurence.
Van Diest, G. A., Prairie View.
Williamson, W. H., Larned.

KENTUCKY.

Aitkin, Chas. W., Flemingsburg.
Armstrong, W. F., Henderson.
Baird, J. W., Chaplin.
Berry, W. D., Louisville.
Bohannon, J. G., Greenville.
Brooks, T. B., Valley.
Cawood, W. P., Cawood.
Cohn, Seldon, Fulton.
Coke, A. L., Sutherland.
Collins, Lister, Mt. Eden.
Cowherd, J. R., New Hope.
Darnell, M. C., Duckers.
Duvall, G. W., Shrewsbury.
Erkiletian, D. H., Hopkinsville.
Fitch, E. R., Russell.
Gilbert, J. W., Lawrenceburg.
Harper, R. D., Paducah.
Herndon, R. H., Ludlow.
Hertzsch, Della, Louisville.
Horene, G. Z., Graefenburg.
Humphrey, W. O., Louisville.
Lex, E. A., Louisville.

Lyon, J. L., Fielden.
McCoy, S. C., Louisville.
Overby, Bob., Birmingham.
Owen, W. B., Louisville.
Payne, J. E., Curdsville.
Pipes, M. L., Moreland.
Porter, R. S., Davisburg.
Reeves, W. S., Wyoming.
Shelburn, S. C., Cunningham.
Thompson, E. L., Pierce.
Vorles, W. L., Campbellsburg.
Westerfield, A. A., Utica.
Westerfield, J. B., Barboursville.
Wetherby, S. D., Middletown.
Williams, J. R., Boreing.

LOUISIANA.

Duval, J. B., Houma.
Phillips, J. W., Zimmerman.
Wise, W. L., Lena.

MAINE.

Hutchins, W. P., Rumford Falls.

MARYLAND.

Cornell, W. R., Towson.
Ford, R. H., Queenstown.
Hess, H. C., Baltimore.
Janney, O. E., Baltimore.
Mitchell, R. L., Baltimore.
Price, J. M., Frostburg.
Strouse, Solomon, Baltimore.
Thomas, J. G., Adamstown.
Walton, H. J., Baltimore.

MASSACHUSETTS.

Adler, H. M., Boston.
Baylies, Andrew, Worcester.
Brown, L. T., Worcester.
Chadbourne, A. P., Boston.
Cotter, E. J., Boston.
Davis, F. A., Boston.
Dugdale, Frederick, Lowell.
Houghton, H. L., Winchester.
Latham, B. M., Mansfield.
Loewe, L. J., Whitman.
MacLeod, J. M., Quincy.
Mathes, R. W., Lynn.
Mills, A. V., Attleboro.
Osgood, G. E., W. Somerville.
Peabody, F. W., Cambridge.
Reid, I. E., Boston.
Rumrill, S. D., Springfield.
Sabine, Jane D. K., Boston.
Wilder, W. O., Pittsfield.

MICHIGAN.

Armstrong, O. S., Detroit.
Hoops, G. B., Detroit.
Johnson, Gertrude M., Battle Crk.
Ney, G. S., Port Huron.
Unger, A .E., Dundee.

MINNESOTA.

Adams, J. L., Morgan.
Ewing, C. F., Wheaton.
French, E. A., Plainview
Gerber, L. M., Jasper.
Ghent, M. M., St. Paul.
Giffin, H. Z., Rochester.
Holl, P. N., Minneapolis.
Irish, P. H., Akeley.
Lane, Laura A., Minneapolis.
Leland, J. T., Herman.
Leland, M. N., Minneapolis.
Lester, C. A., Wabasha.
Luedtke, G. H., Fairmont.
Mullin, R. H., Minneapolis.
Slocumb, Maude S., Minneapolis.
Whetstone, Mary S., Minneapolis.

MISSISSIPPI.

Adams, J. S., Orvisburg.
Catching, W. W., Georgetown.
Fox, L. T., Stonewall.
Frizell, H., Vaughans.
Holloway, T. M., Weir.
Jones, F. L., Blue Springs.
Kendrick, C., Kendrick.
Terry, H. M., Goodman.
Thompson, F. H., Bogue Chitto.

MISSOURI.

Alt, Adolf, St. Louis.
Barker, J. C., Russ.
Bell, J. W., Kansas City.
Bourn, J. J., Hannibal.
Bradley, A. H., St. Louis.
Chapman, Chas., Shelbina.
Cooley, E. L., St. Louis.
Dearing, W. A., Jamestown.
De Vilbiss, E. F., Nevada.
Frohling, F. W., Kansas City.
Gartside, J. E., Kingston.
Gayle, V. W., Kansas City.
Geiger, Charles, St. Joseph.
Greer, E. O., St. Louis.
Grosse, L. W., St. Louis.
Hardy, J. W., Sumner.
Herbert, T. B., Lebanon.
Horton, W. H., Purdy.
Howard, C. F., Deepwater.
Iralson, Abe., St. Louis.
Loeb, Virgil, St. Louis.
Mead, S. T., Nevada.
Miller, E. M., Mound City.
Morris, R. H., Linneus.
Nagle, P. E., Billings.
Pitzman, Marsh., St. Louis.
Post, W. B .Carthage.
Rentfro, E. W., Rayville.
Scanlon, T. W., Polo.
Schultz, Edward, St. Louis.
Shankland, J. W., St. Louis.
Thompson, W. G., Holden.
Westerman, C. M., St. Louis.
Wherritt, H. B., Independence.
Wilson, J. S., Deepwater.
Winn, R. M., Saverion.

MONTANA.

Belcher, J. L., Townsend.

NEBRASKA.

Demaree, H. C., Roca.
Elmore, S. Q., Gretna.
Franklin, W. A., Hastings.
Heine, W. H., Hooper.
Lukens, Isaiah, Tekamah.
Malone, F. F., Lincoln.
Newell,, H. J., Alexandria.
Preston, S. A., Howells.
Randall, A. LaRoy, Pleasonton.
Ray, A. R., Fairfield.
Tyler, A. F., Omaha.
Walker, D. A., Mullin.
Witte, Wm., Hubbard.

NEW HAMPSHIRE.

Batchelder, E. C., Dover.
Chase, D. R., Oxford.
Cheever, N. F., Greenfield.
Lord, L. W., West Ossipee.
Lyons, W. H. A., Manchester.
Richard, J. H., Dover.
Stark, M. A., Goffstown.
Stokes, D. L., Rochester.

NEW JERSEY.

Lore, H. E., Fairton.
Graff, E. R., Somerville.
Robinson, S. E., Waldwick.
Sewall, M. F., Bridgeton.
Van Ess, John, Paterson.
Young, P. C., Ringoes.

NEW YORK.

Becker, W. D., Rochester.
Bernstein, Charles, Rome.
Betts, Lester, Schenectady.
Brewer, G. E., New York City.
Busck, G. J., New York City.
Coleman, Warren, New York City.
Crofutt, E. F., New York City.
Dorn, E. I., Brooklyn.
Draper, E. L., Albany.
Duryee, C. C., Schenectady.
Garrigan, Gerald, New York City.
Gibson, J. A., Buffalo.
Harris, J. G., Poughkeepsie.
Hemstreet, C. A., Troy.
Hill, Isadore L., New York City.
Horton, E. B., Niagara Falls.
Hoyt, D. J., Poughkeepsie.
Hyland, T. G., Amsterdam.
Kelley, J. S., Binghamton.
Leahy, B. J., Port Jervis.
Leshure, John, New York City.
Lewis, F. N., New York City.
Meidenbauer, J. G., Buffalo.
O'Brien, Juel., Elmira.
O'Donnell, W. J., Buffalo.
Pershing, E. H., Lawrence.
Rapp, W. N., Argyle.
Reid, J. H., Troy.
Rulison, H., Albany.
Schneider, Saml, New York City.
Simpson, L. F., Rochester.
Sinclair, D. A., New York City.
Snow, I. M., Buffalo.
Starr, M. A., New York City.
Swartwout, H. B., Port Jervis.
Wells, C. E., Sag Harbor.
Welzmiller, John, New York City.
Witbeck, C. E., Cohoes.

NORTH CAROLINA.

Casteel, L. R., Culberson.
Lyday, A. E., Penrose.
Nichols, C. G., Roxboro.

NORTH DAKOTA.

Alexander, J. C., Tower City.
Bartley, W. M., Sheyenne.
Ekrem, J. M., Minot.
Ferguson, S. M., Brocket.
Hotchkiss, W. M., New Rockford.
Norriss, H. C., Dickey.
Ritchie, C. K., Velva.
Witherstine, W. H., Grand Forks.

OHIO.

Beekel, Frederick, Cleveland.
Bell, W. H., Cincinnati.
Betts, Charles, Toledo.
Black, J. N., Perry.
Brody, Myer, Cleveland.
Burritt, C. A., Toledo.
Barbyshire, M. A., McComb.
Deem, G. W., Hillards.
Gardner, John, Toledo.
Gamble, C. D., Spencerville.
Harman, F. C., Glandorf.
Hempstead, Helen, Cleveland.
Henderson, G. W., West Cairo.
Hoover, C. E., Edgerton.
Hunt, H. B., St. Paris.
Kerr, L. E., East Toledo.
Krape, J. H., Kent.
Mateer, H. N., Wooster.
Mendenhall, W. C., Trotwood.
Milliette, D. R., Anna.
Morris, E. H., Dayton.
Mowry, Charles, Napoleon.
McClure, C. R., Cincinnati.
McMurray, James, Hubbard.
Newcomb, J. I., West Unity.
Nihart, O. H., Edon.
O'Brine, David, Urbana.
Orr, G. B., Cincinnati.
Roberts, G. J., Westminster.
Ryder, J. C., Eaton.
Sallume, N. N., Toledo.
Schwagmeyer, A., Cincinnati.
Schaeffer, C. A., Hamilton.
Shumaker, D. W., Canal Dover.
Silver, H. Z., Gordon.
Skiff, M. J., Ashtabula.
Sprague, W. V., Chauncey.
Staub, G. S., Dayton.
Stoll, C. W., Dover.
Stoll, K. L., Cincinnati.
Talley, C. F., Powell.
Thatcher, W. F., Jefferson.
Thompson, W. S., Girard.
Wehr, C. J., Bellevue.
Winans, J. V., Madison.
Woodward, H. L., Cincinnati.
Wright, T. M., Troy.

OKLAHOMA.

Bassett, W. M., Jet.
Caldwell, C. W., Chelsea.
Colby, J. H., Purcell.
Flagg, E. E., Moreland.
Hall, G. O., Carnegie.
Houseworth, A. L., Cashion.
Knowles, W. L. M., Nowata.
Kuhn, J. F., Oklahoma City.
Langford, Wm., Oklahoma City.
Racer, F. H., Woodward.
Riely, L. A., Oklahoma City.
Robertson, I. W., Dustin.
Shelton, J. W., Wynnewood.
Smith, M. T., Haskell.
Wallace, W. M., Drake.

OREGON.

Hestor, T. W., Jacksonville.
Manion, Florence S., Portland.
Middleton, C. S., Klamath Agency.

PENNSYLVANIA.

Bloomberg, S. S., Pittsburg.
Brown, W. H., Richlandtown.
Freeman, W. S., Philadelphia.
Jenkins, D. J., Scranton.
Keller, D. H., Russell.
Miller, D. J. M., Philadelphia.
Noone, M. J., Scranton.
Park, C. E., Avoca.
Pennock, W. J., Philadelphia.
Unger, D. F., Mercersburg.
Upham, Helen F., Pittsburg.
Van Pelt, W. T., Philadelphia.

RHODE ISLAND.

Kerr, R. W., Newport.

SOUTH DAKOTA.

Carr, Albert, Hill City.
Trooien, P. O., Toronto.

TENNESSEE.

Larimore, H. P., Chattanooga.
Peete, E. M., Memphis.
Sauls, D. K., Memphis.
Sharber, A. L., Nashville.
Wilson, J. F., Burlison.

TEXAS.

Blair, S. F., Klondike.
Burnett, J. H., Kopperl.
Callan, G. P., Proctor.
Dodge, S. T., Corpus Christi.
Graham, W. A., Faifurrias.
Holliday, Margaret, Austin.
Laidacker, N. E., China.
McElhannon, M. P., Belton.
Watson, J. T., Dallas.

UTAH.

Arntzen, J. L., Salt Lake City.
Hasler, W. T., Lehi.
Hummer, L. F., Salt Lake City.
Neher, E. M., Castle Gate.

VERMONT.

Bombard, B. J. A., Burlington.

VIRGINIA.

Dearmont, C. O., White Post.
Jones, J. B., Petersburg.

WASHINGTON.

Abrams, C. J., Hillyard.
Alexander, C. B., Mabton.
Collins, F. H., Goldendale.
Jordan, Arthur, Seattle.
McRae, R. D., Hunters.
Richty, John, Seattle.

WEST VIRGINIA.

Baker, L. A., Alvy.
Hamrick, R. A., Clay.
Harris, T. G., Mineral.
King, J. M., Buckhannon.
Lantz, J. O., Hartmonsville.
Shepherd, W. S., Wright.
Weirich, C. R., Wellsburg.

WISCONSIN.

Allen, A. L., Norwalk.
Allen, L. P., Oshkosh.
Bardeen, C. R., Madison.
Beffel, J. M., Milwaukee.
Belitz, William, Cochrane.
Brunkhorst, F. O., Cuba City.
Bryant, J. R., Lyndon Station.
Burke, James, Manitowoc.
Fairfield, W. E., Green Bay.
Harper, C. A., Madison.
Haushalter, H. P., Milwaukee.
Holliday, E. R., Ellsworth.
Jones, E. H., Weyauwega.
Lacey, S. W., Footville.
Lockhart, J. W., Omro.
Malone, T. C., Milwaukee.
Meany, J. E., Manitowoc.
Merrill, W. G., Necedah.
Ott, H. A., Reedsville.
Parham, G. H., Necedah.
Payne, A. L., Eau Claire.
Peterson, G. E., Waukesha.
Prill, H. F., Augusta.
Rice, R. H., Delavan.
Rosinberry, B. P., Arcadia.
Ross, P. M., Waldo.
Schmit, A. T., Beloit.
Schnug, Max, Caroline.
Stoye, J. P., Theresa.
White, W. E., Lyons.
Wilcox, A. G., Sonon Springs.

WYOMING.

Bennett, W. S., Meeteetse.
Hurd, Anna G., Sheridan.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

VANADIUM AS A THERAPEUTIC AGENT.

PITTSBURG, PA., May 1, 1907.

To the Editor:—Will you kindly inform me if vanadium or any of its compounds have come to be recognized as valuable therapeutic agents? The metal has remarkably high oxidizing powers. Because of this characteristic, Dr. Le Tanneur of Paris, in a book dealing with the matter under the heading Vanadio-thérapie, claims wonderful virtues for various preparations of the element for oral and hypodermic administration. From what I can gather, a sort of "perpetual motion" machine for energizing the economy is here said to be available owing to the activities set in motion and maintained by the preparations of vanadium advocated for use in

depleted and other conditions. Can you give me information regarding Dr. Le Tanneur? His idea came first from a physicist, I believe—a M. Helonis. I should be glad to have any information throwing additional light on this enthusiastically advocated usage of vanadium or on its sponsor. C. C. WHOLEY, M.D.

ANSWER.—We have no knowledge of Dr. Le Tanneur or of the book referred to. Vanadium is classed with niobium and tantalum in a group which resembles the nitrogen and phosphorus group of elements. The compounds used for therapeutic purposes are vanadic acid (HVO_3) or its salts such as sodium or ammonium vanadate. Such therapeutic effects as they may possess are believed to be due to their oxygen-carrying power. Le Bond and David claim (*Jour. de méd. de Paris*, XV, 1903, 191-193; and *Progrès méd.*, July 14, 1906) that vanadic acid acts internally as a tonic and appetizer and they recommend it for internal use in anemia, cachexia, and tuberculosis. Le Blond and Bourgeois have reported (*Communication à la Soc. méd. du LXe Arrondissement*) the rapid cicatrization of a very old lupus to which a solution of vanadic acid was applied after the follicles had been opened by multiple incisions to permit the agent to penetrate to the interior of the tissue. Le Blond and David say that the external use of the remedy is indicated in simple wounds, malignant pustules, tuberculous and syphilitic lesions, varicose ulcers, and other trophic lesions. They have noticed no ill effects except an erythematous eruption in one case, which disappeared with the cessation of treatment. These authors call the solution which they use "oxydasine." They employ for internal use a solution containing 0.0015 gm. in a liter of water (1/40 grain to the quart), which is given in doses of two tablespoonfuls a day. For external use a stronger solution is made containing 0.50 gm. in a liter of water (7½ grains to the quart). The latter solution is again diluted from three to ten times with water for ordinary external use, but for use on the mucous membranes, instead of water two parts of glycerin are added. The claims made for vanadium have not led to its wide use and until they are confirmed by reliable clinicians the remedy must be regarded as in the experimental stage. It is not proprietary and may be obtained through the dealers in chemicals.

TRANSMISSIBILITY OF BOVINE TUBERCULOSIS.

KALAMAZOO, MICH., April 27, 1908.

To the Editor:—Will you kindly furnish me the following information through the Queries column of THE JOURNAL. What is the consensus of opinion in regard to the transmissibility of bovine tuberculosis to man? Kindly give me some idea as to recent literature on bovine tuberculosis. E. J. BRADY.

ANSWER.—This question is still unsettled, but the weight of authority inclines to the view that the transmission of bovine tuberculosis to man is possible, but probably infrequent. Children, it is claimed, are more liable to be affected than adults. The literature on the subject is too extensive to include here, but the following are important references and cover both views:

Koch, R.: Communicability of Bovine Tuberculosis to Man, *Deutsch. med. Wchnschr.*, Nov. 20 and 27, 1902; abstracted in THE JOURNAL, Dec. 20, 1902, p. 1625.

Ravenel, M. P.: Bovine Tuberculosis a Factor in the Causation of Human Tuberculosis, *Maryland Med. Jour.*, February, 1904; abstracted in THE JOURNAL, Feb. 6, 1904, p .391.

Rabinowitsch, L.: Relations Between Human and Bovine Tuberculosis, *Berl. klin. Wchnschr.*, xliii, No. 23.

Salmon, D. E.: Bovine and Human Tuberculosis, THE JOURNAL, March 12, 1904, p. 692.

Kossel, H.: Human and Bovine Tuberculosis, *Brit. Med. Jour.*, Dec. 2, 1905; abstracted in THE JOURNAL, Dec. 30, 1905, p. 2032.

Raw, N.: Human and Bovine Tuberculosis, *Brit. Med. Jour.*, Aug. 18, 1906; abstracted in THE JOURNAL, Sept. 15, 1906, p. 898.

Shaw, H. L.: The Present Status of the Transmissibility of Bovine Tuberculosis, THE JOURNAL, Oct. 12, 1907, p. 1276.

Ravenel, M. P.: Etiology of Tuberculosis, *Am. Jour. Med. Sci.*, October, 1907; abstracted in THE JOURNAL, Nov. 16, 1907, p. 1717

Smith, Theo.: Channels of Infection in Tuberculosis, *Boston Med. and Surg. Jour.*, Sept. 26, 1907; abstracted in THE JOURNAL, Oct. 12, 1907, p. 1309.

Report of the Royal Commission on Human and Animal Tuberculosis, THE JOURNAL, Jan. 4, 1908, p. 56.

IVY POISONING.

HUDSON, OHIO, April 27, 1908.

To the Editor:—What can be used to prevent autointoxication in a case of ivy poisoning? Can the active irritant of ivy or sumach be neutralized or rendered inert in a manner similar to that of antiseptics in germ infections? GEORGE M. FROST.

ANSWER.—So far as our present knowledge extends, it seems an established fact that ivy poisoning depends not on an infectious germ, but on a chemical poison. Hence the remedy is not an antiseptic but an antidote. Acetate of lead is supposed to act as an antidote by precipitating the poison as an insoluble compound with lead. The favorable action of potassium permanganate may be by its oxidizing the poison and thus rendering it harmless. Sodium thiosulphate may act by destroying the poison by reduction. The value of grindelia robusta may reside in its being a protective varnish. The treatment of ivy poisoning was discussed in the following articles in THE JOURNAL: "Efficient Treatment of Ivy Poisoning," THE JOURNAL, Aug. 31, 1907, p. 789. "Ivy Poisoning," THE JOURNAL, Sept. 21, 1907, p. 1042.

The Public Service

Army Changes.

Memorandum of stations and duties of medical officers, U. S. Army, week ending May 2, 1908:

Carter, E. C., surg., granted leave of absence for two months, about June 1.

Craig, C. F., asst.-surg., granted leave of absence for two months, about July 1.

Williams, A. W., asst.-surg., granted leave of absence for two months, at its expiration to proceed to Fort H. G. Wright, N. Y., for duty.

Davis, W. R., asst.-surg., granted leave of absence for fifteen days.

Raymond, T. U., surg., granted leave of absence for one month.

Banta, W. P., asst.-surg., granted leave of absence for four months.

Fisher, H. C., surg., relieved from duty at Fort Logan, Colo.; ordered to Washington, D. C., for instructions; thence to Fort Slocum, N. Y., to familiarize himself with certain methods pertaining to the examination of recruits, and thence to Columbus Barracks, Ohio, for duty.

Raymond, H. I., surg., relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Sam Houston, Texas, for duty.

Vose, W. E., asst.-surg., relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Slocum, N. Y., for duty.

LeWald, L. T., asst-surg., relieved from duty at Fort Slocum, N. Y., and ordered to Columbus Barracks, Ohio, for duty.

Gosman, G. H. R., asst.-surg., relieved from duty at Columbus Barracks, Ohio, and ordered to Fort Morgan, Ala., for duty.

Powell, J. L., dep. surg. gen., granted an extension of eight days to his leave of absence.

Raymond, T. U., surg., order for Fort Sam Houston, Texas, is amended; will proceed to Fort Logan, Colo., for duty.

Rockhill, E. P., asst. surg., relieved from observation and treatment at the General Hospital, Fort Bayard, N. M., and from further duty in the Philippines division, and ordered to duty at that hospital.

Whinnery, J. C., dental surg., left Fort Lawton, Wash., for duty at Vancouver Barracks, Wash.

Voorhies, H. G., dental surg., arrived at Fort Meade, S. D., for duty.

Weston, H. R., cont. surg., ordered from Windsor, Vt., to Fort Ethan Allen, Vt., for duty.

Jones, E. C., cont. surg., granted leave of absence for ten days.

Murray, Wilson, cont. surg., granted leave of absence for four months.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending April 26, 1908:

Fiske, C. N., P. A. surgeon, orders to Washington, D. C., revoked; to continue treatment at the Naval Hospital, Mare Island, Cal.

Koltes, F. X., asst.-surgeon, detached from the Navy Yard, Mare Island, Cal., and ordered to the *Connecticut*.

Ransdell, R. C., asst.-surgeon, detached from the *Connecticut* and ordered to the second torpedo flotilla.

Ziegler, J. G., acting asst.-surgeon, ordered to duty at the Naval Hospital, Portsmouth, N. H.

Fiske, C. N., P. A. surgeon, ordered home and granted sick leave for two months, when discharged from treatment at the Naval Hospital, Mare Island, Cal.

Changes in the Medical Corps, U. S. Navy, for the week ending May, 2, 1908.

Spear, D. A., asst.-surgeon, ordered to duty at the naval hospital, Washington, D. C.

Plummer, R. W., surgeon, commissioned surgeon from February 23, 1908.

Rothganger, G., surgeon, granted sick leave for three months, when discharged from treatment at the naval hospital, New York, New York.

Bacon, S., Rhodes, G. C., Hough, F. R. W., Biello, J. A., asst.-surgeons, appointed assistant surgeons from April 11, 1908.

Cook, F. C., surgeon, detached from the Naval Academy and ordered to the *North Carolina* when commissioned.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ended April 29, 1908:

Mead, F. W., surgeon, granted leave of absence for 10 days, from April 12, 1908, amended to read on account of sickness.

Wasdin, E., surgeon, directed to proceed to certain points in Mississippi for special temporary duty, on completion of which to rejoin his station.

Brooks, S. D., surgeon, granted leave of absence for three days, from April 20, 1908, revoked.

Oakley, J. H., P. A. surgeon, leave of absence granted for one month from April 15, 1908, amended so as to be effective April 17, 1908.

Parker, H. B., P. A. surgeon, granted leave of absence for nine days, from April 18, 1908, on account of sickness.

Boggess, J. S., P. A. surgeon, relieved from duty at Chicago and directed to proceed to Seattle, Wash., reporting to the commanding officer of the Revenue-Cutter *Perry*, not later than May 5, 1908, for duty.

Foster, A. D., P. A. surgeon, relieved from duty at Ellis Island, and directed to proceed to Port Townsend, Wash., reporting to the commanding officer of the Revenue-Cutter *Thetis*, not later than May 5, 1908, for duty.

Hurley, J .R., asst.-surgeon, relieved from special temporary duty at San Francisco and directed to report to the commanding officer of the Revenue-Cutter *Bear*, not later than May 5, 1908, for duty.

Wood, C. E., asst.-surgeon, relieved from duty at Stapleton, N. Y., and directed to proceed to Chicago, reporting to the medical officer in command for duty and assignment to quarters.

Olesen, Robert, asst-surgeon, relieved from duty at the marine hospital, San Francisco, and directed to report to the commanding officer of the Revenue-Cutter *McCullough*, not later than May 5, 1908, for duty.

Goldsborough, B. W., acting asst.-surgeon, granted leave of absence for three days, from April 28, 1908.

Green, E. S., acting asst.-surgeon, granted leave of absence for 12 days, from April 18, 1908.

Gustetter, A. L., acting asst.-surgeon, granted leave of absence for three days, from April 27, 1908.

Jackson, J. M., acting asst.-surgeon, leave of absence granted for 10 days, from April 4, 1908, amended so as to read for 16 days, from April 4, 1908.

Simonson, G. T., acting asst.-surgeon, granted leave of absence for four days, from April 30, 1908.

Simonson, G. T., acting asst.-surgeon, granted extension of leave of absence for two days, from May 5, 1908.

Thomas, J. N., acting asst.-surgeon, directed to proceed to Puerto Barrios, Guatemala, for special temporary duty.

BOARD CONVENED.

A board of medical officers was convened to meet at Seattle, Wash., April 24, 1908, for the purpose of making physical examination of an alien immigrant. Detail for the board: P. A. Surgeon M. W. Glover, chairman; Asst.-Surgeon C. W. Chapin; Acting Asst.-Surgeon P. R. Underwood, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 1, 1908:

SMALLPOX—UNITED STATES.

California: Los Angeles, April 4-11, 2 cases.
District of Columbia: Washington, April 11-18, 5 cases.
Illinois: Chicago, April 11-18, 4 cases; Galesburg, April 11-18, 8 cases; Springfield, April 9-16, 6 cases.
Indiana: Indianapolis, April 12-19, 7 cases; Lafayette, April 13-20, 1 case.
Kansas: Kansas City, April 11-18, 20 cases; Wichita, April 11-18, 9 cases.
Louisiana: New Orleans, April 11-18, 7 cases, 1 death.
Maryland, Baltimore, April 11-18, 1 case.
Michigan: Detroit, April 4-11, 4 cases; Grand Rapids, April 4-18, 3 cases; Kalamazoo, March 28-April 11, 2 cases.
Mississippi: Greenville, February 1-29, 4 cases; March 1-31, 4 cases.
Missouri: Kansas City, March 4-18, 24 cases; St. Louis, April 11-18, 3 cases.
Montana: Butte, March 31-April 7, 3 cases.
Nebraska: Nebraska City, April 11-18, 2 cases.
North Carolina: Charlotte, April 4-18, 2 cases.
Ohio: Cincinnati, April 10-17, 9 cases, 1 death; Dayton, April 11-18, 1 case.
Tennessee: Nashville, April 11-18, 1 case.
Texas: Fort Worth, March 1-30, 58 cases.
Vermont: New Bury, March 12-18, 10 cases.
Washington: Spokane, April 4-11, 12 cases; Tacoma, March 28-April 4, 1 case.
Wisconsin: La Crosse, April 11-18, 3 cases; Milwaukee, April 4-18, 5 cases; Racine, April 11-18, 4 cases.

SMALLPOX—FOREIGN.

Arabia: Aden, March 23-30, 2 deaths.
Austria: Vienna, March 28-April 4, 1 case.
Brazil: Bahia, February 29-March 28, 80 cases; Pernambuco, February 1-29, 85 deaths; Para, March 28-April 4, 1 case; Rio de Janerio, March 28, April 4, 196 cases, 70 deaths.
China: Hongkong, February 22-March 7, 62 cases, 45 deaths; Shanghai, March 8-15, 2 cases, 3 deaths.
Ecuador: Guayquill, March 14-28, 8 deaths.
Egypt: Cairo, March 18-25, 1 case 1 death; Suez, February 18-March 18, 8 cases.
Formosa: March 7-14, 5 cases.
France: Marseilles, March 1-31, 4 deaths; Paris, March 28-April 4, 5 cases.
Germany: General, March 29-April 11, 43 cases.
Great Britain: Leith, March 21-28, 1 death.
India: Bombay, March 17-24, 67 deaths; Calcutta, February 22-March 14, 40 deaths.
Italy: General, April 2-9, 19 cases; Catania, March 26-April 9, 5 cases, 3 deaths; Naples, March 28-April 4, 1 case.
Japan: Kobe, March 7-14, 56 cases, 39 deaths; March 14-21, 34 cases, 20 deaths; Nagasaki, March 14-22, 1 case, 1 death; Osaka, March 7-14, 306 cases, 101 deaths.
Mexico: Aguas Calientes, March 29-April 12, 4 deaths; City of Mexico, March 7-14, 13 cases.
Portugal: Barreiro, March 28-April 4, 1 case; Lisbon, March 28-April 4, 1 case.
Russia: Moscow, March 14-28, 38 cases, 19 deaths; Riga, March 28-April 4, 5 cases; St. Petersburg, March 14-21, 26 cases, 2 deaths; Warsaw, February 8-March 14, 34 deaths.
Spain: Denia, March 21-April 4, 20 cases, 3 deaths; Madrid, March 1-31, 1 death; Valencia, March 22-April 5, 37 cases, 3 deaths.
Straits Settlements: Penang, March 7-14, 2 cases; Singapore, February 27-March 7, 1 case, 1 death.
Turkey: Smyrna, February 23-March 24, 13 deaths.

YELLOW FEVER.

Brazil: Para, March 28-April 4, 5 cases, 4 deaths; Rio de Janeiro, March 15-22, 1 case, 1 death.
Ecuador: Guayaquil, March 14-28, 5 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, February 22-March 7, 8 cases, 7 deaths.

CHOLERA—FOREIGN.

Cochin China: Saigon, February 21-March 7, present.
India: Calcutta, February 22-March 14, 399 cases, 399 deaths; Madras, March 14-20, 8 cases; Rangoon, March 7-14, 4 deaths.

PLAGUE.

Brazil: Bahia, February 29-March 14, 3 cases, 3 deaths; Rio de Janeiro, March 15-22, 3 deaths.
China: Hongkong, February 22-29, 1 case, 1 death.
Cochin China: Saigon, February 22-March 7, 4 cases,
Ecuador: Guayaquil, March 14-28, 67 deaths.
Egypt: Assiout Province, March 6-12, 6 cases, 6 deaths; Fayoum Province, 2 cases, 1 death; Girgeh, March 8-11, 2 cases, 2 deaths.
India: Bombay, March 17-24, 343 cases, 343 deaths; Calcutta, February 22-March 14, 133 deaths; Rangood, March 7-14, 32 deaths.
Straits Settlements: Singapore, February 27-March 7, 1 death.

Marriages

PARKER SYMS, M.D., to Miss Harriette Barkus, both of New York City, April 20.

SAMUEL KENNEDY, M.D., to Miss Katherine Leefers, both of Shelby, Ind., April 20.

ALFRED G. SHISSLER, M.D., to Miss Irene Heck, both of Shamokin, Pa., April 21.

JAMES A. MCMURRAY, M.D., Marion, Ohio, to Mrs. Harriett Webb, of Newark, Ohio, April 20.

PAUL R. BURROUGHS, M.D., Allison, Iowa, to Miss Grace Crain, of Iowa City, Iowa, April 22.

GARDNER WELLS HALL, M.D., Boston, to Miss Elizabeth Hancock Page, at Brookline, Mass., April 22.

ROBERT HARROLD DONNELL, M.D., Bath, Maine, to Miss Helen Beatrice Maxim, of New Castle, Ind., April 22.

HARRY EARL PFEIFFER, M.D., Cedar Rapids, Iowa, to Miss Altah A. Wilautt, of Iowa City, Iowa, March 11.

CARROL D. BUCK, M.D., U. S. Army, to Mrs. Ynez Shorb-White, at Camp McKinley, Manila, P. I., April 10.

Deaths

Thomas Lafayette Maddin, M.D. University of Louisville (Ky.), Medical Department, 1849; a member of the American Medical Association; a member of the staff of the Nashville Hospital from 1854 to 1861; professor of anatomy for two years and professor of surgery thereafter in Shelby Medical College until the institution was closed by the Civil War, in which he served on the Confederate side; from 1867 to 1906 professor of nervous diseases in the University of Nashville; one of the most prominent physicians and citizens of central Tennessee; died at his home in Nashville, April 27, after an illness of three weeks, aged 83. In 1903 the medical societies and medical profession of Nashville united in tendering to Dr. Maddin a banquet in honor of his semi-centennial as a teacher of medicine in the state.

Abiah Morgan Cartledge, M.D. Hospital College of Medicine, Louisville, Ky., 1882; a member of the American Medical Association; once president of the Southern Surgical and Gynecological Association; professor of abdominal surgery and gynecology in the Louisville Medical College; surgeon to the Louisville, St. Louis & Texas Railroad, and to the Louisville City Hospital; one of the most prominent gynecologists of Kentucky; died suddenly at his home in Louisville, May 4, from angina pectoris, aged 49.

Carlton E. Starrett, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1884; Rush Medical College, Chicago, 1893; a member of the Association of Military Surgeons of the United States and Association of Military Surgeons of the State of Illinois; captain and assistant surgeon

of the Third Illinois Infantry, U. S. V., during the Spanish-American War, serving with that command in Porto Rico; major and surgeon, Illinois National Guard, assigned Third Infantry; surgeon to St. Joseph's Hospital, Elgin; died in St. Luke's Hospital, Chicago, May 1, from diffuse suppurative meningitis, after an illness of one week, aged 43. He was given a military funeral at his home in Elgin, May 3, with full ceremonial, three companies and the hospital corps of the Third Infantry participating.

William Henry Earles, M.D. Rush Medical College, Chicago, 1880; a member of the American Medical Association; dean and professor of surgery in the Medical Department of the Marquette University, Milwaukee Medical College; one of the founders of, and surgeon to Trinity Hospital; editor of the *Milwaukee Medical Journal;* and one of the prominent practitioners of Milwaukee; died suddenly at his home, April 28, from cerebral hemorrhage, aged 55. At a meeting of the combined faculties of the medical, dental and pharmaceutical departments of Marquette University, held April 29, tributes of affection and respect were paid, and it was decided to raise a fund for the erection of a bust of Dr. Earles, to be placed in the college.

William Stevens England, M.D., C.M. McGill University, Montreal, 1889; house surgeon of the Montreal General Hospital for a year after graduation; medical superintendent of the Winnipeg General Hospital from 1890 to 1893; chief surgeon to the Winnipeg General Hospital and consulting surgeon to St. Boniface Hospital, Winnipeg; demonstrator and professor of anatomy, professor of applied anatomy and professor of clinical surgery in the Manitoba Medical College; a member of the British Medical Association; died at his home in Winnipeg, April 24, from cerebral hemorrhage, aged 40.

James N. Buckham, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1878; a member of the American Medical Association and a prominent practitioner of Flint, Mich.; died in Rochester, Minn., recently, after a surgical operation, and was buried April 21, aged 50. At a special meeting of the Genessee County Medical Society, held April 20, a committee was appointed to draft resolutions, expressive of the loss sustained by the members of the society in the death of Dr. Buckham.

Marcello Hutchinson, M.D. Medical School of Harvard University, Boston, 1877; of Lynnfield Center, Mass.; assistant in the agricultural and chemical laboratories of Bussey Institute; once assistant physician of Taunton Insane Hospital; from 1890 to 1899 superintendent of the Massachusetts Hospital for Dipsomaniacs and Inebriates, Foxboro, and from 1899 to 1905 superintendent of the Vermont State Hospital for the Insane, Waterbury; died, April 21, after an illness of three years.

Halstead Alfonso Stansfield, M.D. Cooper Medical College, San Francisco, 1897; passed assistant surgeon, P. H. and M.-H.; who resigned from that service March 23; a member of the American Medical Association; formerly bacteriologist and diagnostician of the marine hospital laboratory, San Francisco; died in the Sutro Forest, near the Affiliated Colleges, April 13, from the effects of a self-inflicted gunshot wound of the head while suffering from mental aberration, aged 33.

Charles J. Aldrich, M.D. University of Wooster, Medical Department, Cleveland, 1882; a member of the American Medical Association, Mississippi Valley Medical Association and Tri-State Medical Society; formerly president of the Academy of Medicine of Cleveland; professor of mental and nervous diseases in the College of Physicians and Surgeons of Cleveland; consulting neurologist to the Cleveland General and City hospitals; died suddenly in Cleveland, April 29, aged 46.

Richard Aylett Barret, M.D. Missouri Medical College, St. Louis, 1854; who afterward graduated in law and adopted that as his profession; for a time secretary of legation at Paris; one of the leaders in the movement which retained Missouri in the Union; for a time editor-in-chief of the St. Louis *Evening Dispatch* and St. Louis *Times*, and private secretary of two mayors of St. Louis; died at his home in St. Louis, April 6, from nephritis, after an illness of two years, aged 73.

Joseph Henry Scammell, M.D. McGill University, Montreal, 1894; a member of the Canadian Medical Association and New Brunswick Medical Society; physician to the Outdoor Department of the St. John (N. B.) General Public Hospital; pathologist to the St. John Home for Incurables; surgeon for the St. John salvage corps and fire and police departments; also for a time deputy quarantine physician; died at his home, April 25, from pneumonia, after a short illness, aged 38.

Samuel Nickles, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1865; a member of the Ohio State Medical Association, Hamilton County Medical Society and Cincinnati Academy of Medicine; a charter member of the German Literary Society; emeritus professor of materia medica and therapeutics in his alma mater; died at his home in Cincinnati, from influenza, April 21, after an illness of three months, aged 74.

Edward M. Rabb, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1878; of San Antonio, Texas; second vice-president of the State Medical Association of Texas in 1893 and 1894, and a member of the Bexar County Medical Society; formerly local surgeon to the San Antonio and Aransas Pass Railway, and physician of Lavaca County; died, April 16, at Brownsville, Texas, aged 55.

James Curtis Ralston, M.D. Jefferson Medical College, Philadelphia, 1903; a member of the Medical Society of the State of Pennsylvania and Allegheny County Medical Society; a well-known physician of East End, Pittsburg, and pathologist to the Pittsburg Hospital of the Sisters of Charity; died in that institution, from septicemia, April 26, after an illness of six months, aged 32.

Gladin Gorin Scott, M.D. University of Louisville (Ky.) Medical Department, 1885; a member of the Medical Association of the State of Alabama and Mobile County Medical Society; formerly of Mobile, but since his retirement a resident of Mount Pleasant, Ala.; died at his home, April 12, after an illness of a few hours.

Ezekiel Morrill, M.D. Dartmouth Medical School, Hanover, N. H., 1857; Castleton (Vt.) Medical College, 1857; assistant surgeon of the Thirteenth New Hampshire Volunteer Infantry and of the First New Hampshire Volunteer Heavy Artillery during the Civil War; died at his home in Concord, N. H., April 18, aged 70.

Gustavus Hay, M.D. Medical School of Harvard University, Boston, 1857; a member of the Massachusetts and Suffolk District medical societies, and the American Ophthalmological Society; a prominent oculist and aurist af Boston; died April 26, at his home in Jamaica Plains, aged 78.

Viceroy Marion Bailey, M.D. Miami Medical College, Cincinnati, 1884; of Dayton, Ohio; a member of the Ohio State Medical Association and the Montgomery County Medical Society; died at the Jewish Hospital, Cincinnati, April 22, after an operation for appendicitis, aged 54.

Thomas Jefferson Casper, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1861; first secretary and chairman of the executive committee of the Ohio Pharmaceutical Association; died at his home in Springfield, Ohio, April 21, from pneumonia, aged 70.

James R. Gray, M.D. Louisville (Ky.) Medical College, 1880; a member of the Kentucky State Association and Hardin County and Muldraugh Hill medical societies; died at his home in Elizabethtown, April 18, from malignant disease, after an illness of about one year, aged 53.

John B. Leitzell, M.D. Pennsylvania Medical College, Gettysburg, 1853; a member of the Illinois State and Stephenson County medical societies; died at his home in Dakota, Ill., April 25, from asthma and lung disease, after an illness of several weeks, aged 79.

George Atlick Curriden, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1892; a member of the American Medical Association; formerly of Washington, D. C.; died in Grand Rapids, Mich., April 15, from accidental poisoning, aged 41.

Dewitt Clinton Crumb, M.D. University of Buffalo (N. Y.), Medical Department, 1871; a member of the medical societies of the State of New York and County of Chenango; a veteran of the Civil War; died at his home in South Otselic, N. Y., April 18, aged 60.

Carl Kitchen, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878; for twenty years a practitioner of Runnells, Iowa; died at his home in Des Moines, Iowa, April 23, from cerebral hemorrhage, after an illness of four days, aged 55.

Isaac N. Hughey, M.D. American Medical College, Eclectic, St. Louis, 1878; of Pomona, Cal.; a veteran of the Civil War; died from septicemia due to an operation wound, at Pomona Valley Hospital, April 16, after an illness of five days, aged 67.

Charles Morris Luckey, M.D. College of Physicians and Surgeons, Chicago, 1884; U. S. pension examining surgeon; at one time mayor of Baldwin, Iowa; died at his home in that city, April 22, from nephritis, after an illness of one year, aged 45.

Jacob K. Zinn, M.D. Physio-Medical College of Medicine, Indianapolis, 1898; a member of the Fountain County (Ind.) Medical Society; died at his home in Covington, Ind., April 23, four days after an operation for appendicitis, aged 44.

William J. Wall, M.D. University of Tennessee, Medical Department, Nashville, 1901; of Inman, S. C.; for several years a member of the Spartanburg County board of education; died at the Spartanburg Hospital, April 24, from appendicitis.

William T. Stanley, M.D. Louisville (Ky.) Medical College, 1889; a member of the American Medical Association; a prominent practitioner of Drew County, Ark.; died at his home in Selma, April 18, aged 41.

Claud H. Lewis, M.D. Jefferson Medical College, Philadelphia, 1878; a member of the Medical Society of the State of North Carolina and Randolph County Medical Society; died at his home in Farmer, April 23.

Chester Pritchard Wagner, M.D. Cooper Medical College, San Francisco, 1907; of San Francsco; an interne in the French Hospital; died, March 4, in that institution, from typhoid fever, aged 27.

James Thomas Holley, M.D. University of Maryland, School of Medicine, Baltimore, 1881; of Port Bolivar, Texas; a member of the American Medical Association; died in Galveston, Texas, April 22, aged 49.

John Robert Dunn, M.D. Medical Department, University of Nashville (Tenn.), 1855; an esteemed practitioner of Robertson County, Tennessee; died at his home in Turnersville, April 20, aged 76.

George F. Abbott, M.D. Dartmouth Medical School, Hanover, N. H., 1892; formerly of Littleton, N. H.; died at Kent, Wash., Dec. 24, 1907, after an illness of three years.

John H. Heidemann, M.D. Washington University Medical Department, St. Louis, 1876; died at his home in St. Louis, April 25, after an illness of four months, aged 63.

Daniel L. Sullivan, M.D. Ohio Medical University, Columbus, 1898; died at his home in Columbus, from typhoid fever, April 24, after an illness of ten days, aged 32.

H. C. Dollar, M.D. Atlanta (Ga.) Medical College, 1875; of Atlanta; died in a private sanitarium in that city, April 19, after an illness of several months, aged 60.

Sidney Rowland Walker, M.D. Cleveland University of Medicine and Surgery, 1895; died suddenly at his home in Aurora, Ohio, April 19, from diabetes, aged 49.

John L. Lusk, M.D. University of Louisville (Ky.) Medical Department, 1889; died at his home in Berea, Ky., April 15, after a prolonged illness, aged 51.

Frederick C. Robinson, M.D. Jefferson Medical College, Philadelphia, 1861; for fifty years a practitioner of Monongahela, Pa.; died April 26, aged 87.

Afred M. Golliday, M.D. Rush Medical College, Chicago, 1860; a rich recluse of Bedford, Iowa; was found dead in that place, April 23, aged 76.

Elias Cornelius Guild, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1874; died at his home in Wheaton, Ill., April 25, aged 76.

Charles G. Crosse, M.D. Eclectic Medical Institute, Cincinnati, 1853; died at his home in Sun Prairie, Wis., April 21, aged 79.

Henry D. Smith, M.D. Kentucky School of Medicine, Louisville, 1892; of Ogden's Landing, Ky.; died April 17, aged 49.

Deaths Abroad.

L. von Schroetter, M.D., the celebrated laryngologist of Vienna, is reported by the cable to have died suddenly April 21, after delivering the inaugural address at the International Congress of Laryngology at Vienna. A souvenir volume was issued in his honor on his seventieth birthday last year. He was professor of internal medicine, and succeeded Türk in the chair of laryngology. As delegate to various international congresses and member of numerous scientific societies, as well as author and teacher, his name is known around the world. His full title was Ritter von Kristelli.

A. V. Cornil, M.D., until last year professor of pathologic anatomy at the University of Paris, prefect and senator, editor of the *Journal des connaissances médicales pratiques* and author of numerous works and manuals on histology and pathologic anatomy; died at Paris, April 14, aged 71.

F. Mracek, M.D., professor of syphilology at the University of Vienna; died April 8, aged 61.

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, CHICAGO, JUNE 2-5.

American Association of Physicians, Washington, May 12-13.
State Medical Association of Texas, Corpus Christi, May 12.
Utah State Medical Association, Salt Lake, May 12-13.
Louisiana State Medical Society, Alexandria, May 12-14.
Montana State Medical Association, Butte, May 13-14.
Arkansas Medical Society, Little Rock, May 13-15.
West Virginia State Medical Association, Clarksburg, May 13-15.
New Hampshire Medical Society, Concord, May 14-15.
Oklahoma State Medical Association, Sulphur, May 14-16.
Illinois State Medical Society, Peoria, May 19-21.
Missouri State Medical Association, Springfield, May 19-21.
Nebraska State Medical Association, Lincoln, May 19-21.
North Dakota State Medical Association, Grand Forks, May 20-21.
Iowa State Medical Society, Des Moines, May 20-22.
Rhode Island Medical Society, Providence, May 26.
Connecticut State Medical Society, New Haven, May 27-28.
American Pediatric Society, Delaware Water Gap, May 26-28.
American Gynecological Society, Philadelphia, May 26.
American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
Nat. Confed. of State Med. Examining, Etc., Boards, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6, 1908.
Massachusetts Medical Society, Boston, June 9-10.
American Climatological Association, Boston, June 9-11.
Maine Medical Association, Bangor, June 10-11.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Regular Meeting, held April 3, 1908.

DR. CHARLES H. PECK in the Chair.

Hernia of the Lung.

DR. EDWARD ADAMS presented a patient with hernia of the lung. The first case of this nature was reported in 1499, since which time but 48 cases have been reported. These 48 cases were classified as follows: Congenital, 10 cases; spontaneous, 8 cases; traumatic, 30 cases. During the Civil War there were about 20,000 injuries to the chest wall, and among these were found but five cases of hernia of the lung. During the Russo-Japanese war not one case was recorded.

The patient was 22 years old, an iron-worker in Buenos Aires. Two years ago, when lifting a heavy piece of iron, he felt something give in his chest and soon noticed a bulging in the upper intercostal region. This was accompanied by pain. On inspection there was found nothing except a slight bulging in the second and third intercostal spaces on the right side and near the median line; this bulging was more marked when he bent forward than when he was in the erect posture. On palpation, the swelling was found to be soft and elastic, and not adherent to the skin. On percussion, it was found to be tympanitic. On auscultation there was a slight exaggeration of the breath sounds and an increased vocal fremitus. The differential diagnosis was to be made from aneurism, empyema, abscess of the lung, angioma, lipoma, cyst and cold abscess. The *x*-ray picture showed nothing. Aspiration of the swelling gave negative results. The treatment consisted in a well-fitting pad held in place by straps. If a cure was not effected in a short time, he intended to cut directly down over the swelling and suture the muscles with silver wire.

DISCUSSION.

DR. WILLIAM HENRY LUCKETT questioned the diagnosis. The patient could not produce this tumefaction while in the erect posture; if this was a hernia he could produce it in whatever position he assumed. The tumor did not crepitate under the finger or on auscultation. He thought that it might be a peculiar sacculation, possibly containing fluid. There might be a small opening, with a sac inside as well as outside the chest wall, a wallet-shaped affair.

DR. H. A. HAUBOLD believed the tumor was too near the median line to be a hernia of the lung. If the patient made a sudden exertion, or took a deep inspiration, the lung would be driven toward the diaphragm, where there was room for it. He suggested that it might be a branchiogenetic cyst.

DR. W. A. V. MOSCHOCOWITZ examined the tumor some time ago and believed it to be a hernia of the lung. He had seen one other such case and this presented similar symptoms.

DR. WILLY MEYER also confirmed the diagnosis. The man got his hernia by lifting a heavy weight. The percussion sounds were those of lung. With increased intrathoracic pressure there was increase in the size of the swelling.

DR. CHARLES A. ELSBERG called attention to the fact that when the patient inspired the skin over the tumor sank in, and when he expired it bulged out. He thought it might be a hernia of the pleura, the sac containing no lung and formed by parietal pleura.

Perforated Gastric Ulcer; Gastroenterostomy.

DR. WILLIAM C. LUSK presented this patient. Two weeks before admission to the hospital he had been having pain after eating. One morning he was seized with sudden pain in the abdomen, which was followed by vomiting. Dr. Lusk saw him at 5 p. m. and found the abdomen rigid and tender, particularly over the region of the appendix and to a less degree over the pit of the stomach. Fourteen hours after the onset of the attack operation was performed. At the point of incision a pint and a half of pus gushed out. The appendix was found to be normal. Another incision was made above, and a small perforation was revealed in the anterior wall of the stomach at the upper portion near the pylorus. There were adhesions around the gall bladder; the gall bladder was adherent over the entire front of the pylorus. The peripheral induration was about one-half an inch. The perforation was closed with three rows of chromic suture uniting the gall bladder to the stomach and finally drawing a piece of fat from above and one from below over the line of union. A posterior gastroenterostomy, leaving no slack in the loop of jejunum, was performed by suture. No irrigation was employed. There was little sponging, and the bulk of the pus was removed by large gauze pads tucked down into the pelvis. Proper drainage was used. The temperature promptly dropped. The patient made an uninterrupted recovery.

Cases Illustrating the Result of Bier's Hyperemic Treatment.

DR. WILLY MEYER believed that Bier's hyperemic treatment was the best method for achieving certain results. Bier started his artificial hyperemia in the treatment of surgical tuberculosis. He then read that pathologists had seen that patients with chronic hyperemia of the lungs due to valvular heart disease would not be stricken with tuberculosis. On the other hand, a patient with stenosis of the pulmonary artery was apt to be stricken with tuberculosis. Then Bier started his surgical investigations in 1892 and he and his followers have since shown results. In Bier's hyperemic treatment, instead of fighting the symptoms of inflammation, the point is to increase them by means of an increased amount of blood. Eleven patients were presented by Dr. Meyer to show the results of the Bier hyperemic treatment.

Importance of Abdominal Position in Operations on the Pleura and Lungs.

DR. CHARLES A. ELSBERG said that if a small opening is made in the right or left pleura of a dog that is lying on the back, or on the right or left side, the animal will, in most instances, continue to breathe well, although the amount of inspired and expired air will be less than the normal. But such an animal is very sensitive to the slightest influence which disturbs the breathing, producing a typical pneumothorax dyspnea. In almost all of the animals in which the size of the opening approached or exceeded the diameter of the trachea, dyspnea and death followed, regardless of what part of the chest was opened. When, however, the animal was operated on while lying flat on its abdomen, not only could a small opening be made and the animal continue to breathe normally, but even a very large opening could be made and the breathing continue regularly and quietly. Again, if a dog on its back with an opening in the chest, with typical violent dyspnea due to pneumothorax, is turned on its abdomen, the breathing will become regular and quiet again, and the pressure of air breathed in and out will be found to be several times as great as when the animal was on its back. On the other hand, a dog on its abdomen with a large opening in one pleural cavity and breathing quietly, can be brought into a condition of grave dyspnea and asphyxia by turning it on its back. These experiments seem to show that, in dogs at least, a pneumothorax is better borne when the animal is on its abdomen than when in any other posture. It was also shown that a pneumothorax was much better borne when the animal was deeply under the influence of the anesthetic.

Dr. Elsberg has applied these results in his work at the Mount Sinai Hospital. All of the patients in whom operations were performed which required the opening of the pleura were operated on lying flat on the abdomen. He has operated on a large number of patients with empyema, on two patients with abscess of the liver, and on three with subphrenic abscess and one with bronchiectatic cavity in the left lung. In all of these the pleura was opened. The patients in whom a normal pleura had to be opened showed few untoward symptoms when the opening was made and air was allowed to enter the pleural cavity. In the patients on whom an operation for empyema was done it was noted that with only one exception the coughing and interference with breathing that is regularly observed when the opening in the pleura is made for this affection was entirely absent.

Arthritis Deformans of Hip; Report of a New Operation.

DR. FRED H. ALBEE discussed the clinical history of this affection (coxitis senilis) and reported one case, that of a man aged 59 years, with an advanced arthritis deformans of the right hip. The brace treatment was recommended and refused. Eleven months ago he sought further treatment. He was a powerfully built man, weighed 185 pounds, and walked with a marked limp. The right shoe was built up two and a half inches. The actual bony shortening was one-quarter of an inch; the practical shortening two and three-quarters inches. The leg was much atrophied and markedly adducted and flexed. Attempts at passive motion were painful. A skiagraph showed the head of the femur much worn away and flattened with many bony outgrowths about the rim of the acetabulum.

In view of the disintegration of the joint, the marked adduction and flexion with firm contractures in a man so large and powerfully built, with the leg in faulty position, with progression toward bony ankylosis, it seemed best to aim for immediate firm ankylosis with the limb in a position of slight overcorrection of the deformity to compensate for the existing practical shortening. Therefore, the operative indications were to devise a procedure which would, if possible, fulfil the above requirements and at the same time produce of itself as little real bony shortening as possible.

The hip joint was reached by an anterior incision five inches long, starting from just below and inside of the anterior superior spine of the ilium, and extending downward along the inner border of the sartorius muscle, which was retracted outward. The muscles and the deep structures were separated by blunt dissection and the iliacus and the rectus femoris muscles were retracted inward. A part of the large ring of osteophytes about the rim of the acetabulum were turned upward with the soft tissues adherent to them. It was thought wise to leave as many as feasible on account of their bone forming possibilities. In so thick a thigh with the presence of so much bony outgrowth it required some care to locate definitely the joint and head. With the head of the bone in situ, about one-half of its upper hemisphere was removed with a large chisel through a plane at right angles to the long axis of the shaft of the femur. Then with the same instrument the acetabulum was transformed into a flat surfaced roof, against which the fresh surface of the head was finally brought into firm contact by abduction of the thigh. On further attempting abduction it was impossible on account of the shortened adductors. An open tenotomy of these tendons and muscles was found necessary before the leg could be brought into proper position. The plain surfaces of the head and acetabulum were then brought together by simply abducting the thigh, and the capsule and soft tissues were then sutured. The leg was put up in a spica from axilla to toes in strong abduction.

This operation has the following advantages: 1. It assures bony union, bringing two large bony surfaces together for

ankylosis and holds them firmly by the mere correction of the deformity. 2. It produces a minimum amount of bony shortening. The patient made an uneventful convalescence and was walking with crutches at the end of four weeks. At the end of nine weeks he walked without cane or crutch, and he went back to his work as patrolman in four months. He has not suffered any pain since the operation and the leg has remained in the corrected position.

Dr. Albee has done this operation five times; all the cases were advanced cases of arthritis deformans. The ages of the patients were respectively 30, 60, 63, 55 and 67. The shock was very slight in every case. This he believed was accounted for by the fact that the hip is not disarticulated, and that there were very few structures cut, and all had healed by first intention. The results in all the cases were most favorable.

FLORIDA MEDICAL ASSOCIATION.

Thirty-fifth Annual Meeting, held in Ocala, April 15-17, 1908.

The President, DR. W. P. LAWRENCE, Tampa, in the chair.

The secretary's report showed a total membership of 272 from twenty county societies, a decrease of 32 members since 1907. At this session, 17 county societies were represented by 22 delegates. The total number of members present was 69.

Officers Elected.

Officers for the ensuing year were elected as follows:

President, Dr. J. F. McKinstry, Gainesville; vice-presidents, Dr. J. D. Love, Jacksonville, Dr. W. H. Powers, Ocala, and Dr. L. A. Peek, Melbourne; secretary, Dr. J. D. Fernandez, Jacksonville (re-elected); councilors, Dr. L. J. Efride, Live Oak, Dr. E. N. Liell, Jacksonville, Dr. D. M. Smith, Ocala, Dr. U. S. Bird, Tampa; librarian, Dr. C. E. Terry, Jacksonville; delegate to American Medical Association, Dr. J. Harris Pierpont, Pensacola; alternate, Dr. C. P. Rogers, Jacksonville; orator 1909, Dr. J. D. Love, Jacksonville. Chairmen of committees 1909: Legislation and public policy, Dr. J. H. Pierpont, Pensacola; publication, Dr. J. D. Fernandez, Jacksonville; scientific work, Dr. John MacDiarmid, DeLand; medical education, Dr. E. N. Liell, Jacksonville.

The report of the secretary of the State Medical Examining Board showed that 31 graduates in medicine took the examination, the results thereof to be determined later. The examination covered two days, April 13 and 14.

House of Delegates.

The House of Delegates held four sessions. They selected Pensacola as the 1909 meeting place, the date to be announced later. It is thought that the gathering in the extreme western end of the state will intensify the interest of the physicians of that section.

A committee was appointed to revise, have printed and issue the constitution and by-laws of the association. The librarian was instructed to have bound such journals and pamphlets on hand, as it was desired should be preserved for future reference.

Report of Committee on Medical Education.

This committee endorsed the standard set forth in Dr. Liell's paper as a prerequisite for the practice of medicine in the state, and also recommended that the paper be referred to the committee on legislation for prompt action thereon, in order that it may eventually become the standard of the Florida Board of Medical Examiners. The committee also approved the action of the American Medical Association in endeavoring to improve the standard of medical schools throughout the country, and finally recommended that the following definition of the act of practice of medicine (being a part of the laws of New York state), be favorably passed on by the association, with the end in view of its being eventually the accepted law of Florida: "A person practices medicine within the meaning of this act who shall either offer or undertake, by any means or method, to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition, charging or receiving therefor money or other compensation or consideration, directly or indirectly."

This report was referred to the committee on medical legislation for prompt action.

Resolutions.

Resolutions as follows were offered by the Bradford County Society, through their delegate:

Resolved: That we favor the passage of a state law giving the Medical Examining Board the right to revoke licenses, on proof of unprofessional conduct, such as (a) addiction to the use of liquors or drugs; (b) unprofessional conduct; (c) committing or offering to commit an abortion; (d) dishonorable conduct; (e) immoral conduct; (f) deceptive public advertising.

Resolved: That we favor a law defining the practice of medicine.

Resolved: That this proposed legislation be referred to the State Association through the regular channels; and be it further

Resolved: That we endorse the Kentucky resolutions regarding nostrums.

These resolutions had been offered before and adopted by the Bradford County Medical Society. On vote the unanimous sentiment of the association was: "The Florida Medical Association endorses the position taken by the Bradford County Medical society in the resolutions offered, and declares the same the sense of this association."

The resolutions were referred to the committee on legislation for action.

The following resolution, offered by Dr. E. W. Warren of Palatka, was unanimously adopted and referred:

Resolved: That the Florida Medical Association favors legislation that will change our present method of execution of criminals, from hanging to electrocution.

Invitation to American Public Health Association.

The association instructed the secretary, Dr. J. D. Fernandez, to invite, by a proper communication, the American Public Health Association to hold their 1909 session in Florida.

Contract Practice.

DR. W. P. LAWRENCE, Tampa, in his presidential address, dealt especially with prophylaxis in the practice of medicine; the prevention of communicable diseases; prevention of ophthalmia neonatorum; medical education, with a view of securing better state laws, controlling the practice of medicine and admission to practice, and contract practice. The latter subject was dealt with in detail, especially as it affects Florida.

The Oration.

DR. C. M. SANDUSKY, Jacksonville, selected as a subject: "As a man thinketh in his heart so is he." The address was masterful, inspiring and appreciated by those in attendance.

Medical Education and State Board Examinations in Florida.

DR. E. N. LIELL, Jacksonville, after summing up conditions as existing to-day, suggested the following standard as a prerequisite to the practice of medicine in Florida in the future. The standard is that accepted by the American Medical Association.

Preliminary Education: A diploma from a recognized high school, or its equivalent, showing that the applicant has passed a satisfactory examination in all branches usually embraced in the curriculum of a four-year high school course.

Medical Education: A recognition by the Board of Medical Examiners of Florida, of all medical colleges requiring not less than four full courses of instruction, each of not less than six months, and extending over a period of four calendar years.

Tetanus; with a Report of a Case Treated by Intraspinal Injections of Magnesium Sulphate.

DR. W. H. POWERS, Ocala, said that a contracted muscle means a working muscle and constant contraction means constant work, therefore, exhaustion, and this is given as the cause of death in tetanus. The intraspinal use of magnesium sulphate paralyzes the muscles, therefore gives rest while the system is elaborating the antitoxin. The injection is comparatively simple. The solution should be used only at body temperature. The injections should be repeated at intervals of from 24 to 72 hours, depending on the severity of the seizures. He reported the case of a negro, who about ten days before consulting physicians, had been shot, the ball entering thigh muscles posteriorly about the middle of the thigh and

ranged upward, probably lodging in the hip. The patient was chloroformed turned on side, flexed, a small area over lumbar vertebræ sterilized, the line at upper margins of innominate bones ascertained and a little to one side of the spinous process a small skin incision was made. An ordinary solid metal 10 c.c. syringe, filled with a 25 per cent. solution of sterilized magnesium sulphate, with about a four-inch needle was used. After inserting the needle approximately to the proper place, the syringe was detached. About 2 c.c. of spinal fluid was allowed to flow, then the syringe was attached and 2 c.c. of magnesium solution injected slowly. A prescription was written for a combination of chloral, bromid and morphin, also for a saturated solution of magnesium sulphate. Three hours later the patient was having mild convulsions. On the third day 10 c.c. of tetanus antitoxin was injected deep into the thigh muscles, along the supposed course of bullet. At the time of injection of tetanus antitoxin patient was considerably worse as regards pulse and respiration, although convulsions were not so severe as when first seen. The next day another spinal injection of magnesium sulphate was made of a slightly larger dose; three hours afterward patient was absolutely relaxed and complained of a "splitting" headache. Six days afterward patient was absolutely rigid, general conditions improved, convulsions not so frequent nor severe. From this on his condition gradually improved under the use of chloral and bromid and salts, until 16 days later he was able to walk around.

DISCUSSION.

DR. ROGERS, Jacksonville, stated that a series of 4 cases Blake of New York had had one recovery with magnesium sulphate. The magnesium sulphate blocks the nerve impulses, prevents the contractions and exhaustion and controls the convulsions. Some patients have been kept perfectly free from convulsions. Dr. Power's dose is, he thinks, a little less than that usually recommended. The rule is to give 1 c.c. of 25 per cent. solution for every 25 pounds of body weight. Dr. Powers in the first dose gave 2 c.c., which would be a small dose for the average negro. In his subsequent doses he gave a little more and presumably this was sufficient to control the convulsions. There is a question as to whether the drug is dangerous. It is too dangerous if we use too much and too many doses; it is stated that there is a cumulative effect; that is, if doses are given too often and too much, that convulsions will return and more of the drug is required to control the convulsions, in which there is danger of causing death. If used in a conservative way and in not too frequent or large doses, it will control the convulsions.

Gallstone Disease.

DR. C. P. ROGERS, Jacksonville, said that it has been stated for many years that between 15 and 20 per cent. of all people who reach the age of 40 have gallstones. For a long time it was believed and taught that gallstones, in the majority of instances, produced no symptoms which might be recognized by patient or physician. Workers, especially in the department of surgery, in the past decade or two have proved conclusively that gallstones are as frequent during life as they have been found to be at autopsies, and that far from being latent and harmless they are a distinct menace to life and a frequent source of chronic ill health.

Diagnosis of Cholelithiasis.

DR. J. E. BOYD, Jacksonville, said that gallstone disease is a common affection. The earliest symptoms are not definitely referred to the region of the gall bladder, but more particularly to the stomach. Only a careful and systematic examination of all patients complaining of dyspepsia, indigestion, etc., will yield an intelligent diagnosis. He believes that attacks of cholecystitis are being diagnosed as malarial fever daily, and that the classical symptoms of colic and jaundice present themselves in only a small proportion of these cases.

DISCUSSION.

DR. E. N. LIELL, Jacksonville, said that the greater complications are associated with stones found in the common duct rather than those in he hepatic duct. The danger, as shown by statistics, is always four times as great with stones in the bile duct in proportion to those in the gall bladder. Pancreatic disease is not an uncommon condition in cholelithiasis.

Rational Treatment of Syphilis and Rheumatism.

DR. T. C. THOMPSON, Jacksonville, has treated patients unable to go to Hot Springs, Ark., with the electric bath, and has found this method of treatment satisfactory, particularly in the nervous types of the disease and in tertiary lesions.

DISCUSSION.

DR. J. E. BOYD, Jacksonville, said that a year and a half ago he was making a trip to Hot Springs and consented to look into the matter for Dr. Thompson. He got thorough information from the leading physicians as to their methods of handling syphilitics and the methods carried out at that place. Afterward he satisfied himself that the electric bath filled all the requirements. During the last year he has used this treatment for all patients who were not financially able to go to Hot Springs, instead of attempting to administer mercury by the mouth or hypodermically. In no case has he been disappointed by the results obtained. Patients have responded promptly.

Other Papers Read.

The following papers were also read:

"Great Work of the American Medical Association; A New Era in Medicine," J. H. Hodges, Gainesville. "Mosquitoes and Other Parasites," Hiram Byrd, Jacksonville, illustrated by stereopticon. "The *X*-Ray as an Aid to Diagnosis," P. C. Perry, Jacksonville, with demonstration of *x*-ray work. "Chronic Suppuration of the Middle Ear," C. Drew, Jacksonville. "Intestinal Obstruction," E. N. Liell, Jacksonville. "Tuberculous Arthritis of the First and Second Cervical Vertebræ," F. W. Wilcox, St. Petersburg. "The Leucocytes in Appendicitis," Raymond C. Turck, Jacksonville. "Larval Tapeworm in Human Flesh," H. Gates, Manattee. "A Visit to the Mayo Bros., at Rochester, Minn." E. Van Hood, Ocala. "The Nasal Septum," U. S. Bird, Tampa. "Sequelæ of La Grippe in the Ear, Nose and Throat," W. S. Manning, Jacksonville. "The Treatment of Pelvic Inflammatory Disease," G. R. Holden, Jacksonville. "Menstruation, the Cause of Acute Otitis," F. P. Hoover, Jacksonville. "A Case of Hematochyluria, Due to Filaria Sanguinis Hominis," H. C. Dozier, Ocala. "Neglected Common Throat Troubles," L. A. Bize, Tampa. "Rachitis," W. E. Ross, Jacksonville. "Inguinal Hernia," R. L. Harris, Orlando. "The Physician and the Pharmacopeia," C. L. Jennings, Jacksonville. "Pus Tubes in Male and Female," C. M. Greiner, Jacksonville. "Hemorrhagic Fever," J. D. Bennett, Crystal River. "An Epidemic of Infantile Paralysis," L. J. Efride, Live Oak. "Germs in Health and Disease," J. W. Duncan, Atlanta, Ga.

BOSTON MEDICAL LIBRARY MEETING.

Held March 18, 1908.

DR. RICHARD C. CABOT, Chairman.

The Therapeutic and Diagnostic Value of Tuberculin.

DR. LAWRASON BROWN claimed that tuberculin for diagnostic purposes, commonly used in Germany, feared in England and France, has been but little used in this country, except in cattle. Since 1906 tests have been more freely made. Most recent has been the cutaneous method. Conjunctival and subcutaneous tests are also used. The latter, which in his hands has been used eight years with no bad results, is best and surest.

For therapeutic purposes Trudeau alone has made any large use of tuberculin. He prefers a mixture of equal parts of T.R. and B.E. Keep on ice and in dark and with 0.25 per cent. phenol in normal salt solution. Give subcutaneously, deep, 4 to 8 cm. below the scapulæ. First dose should be very small. Patients vary in susceptibility. Give not oftener than twice a week. Gradually increase dose till over-stimulation is evident, and then reduce at once, or it may be omitted for one or more times. The doses may be guided by the opsonic index. But that is not necessary. Avoid hypersusceptibility. Use great care in all details. Give in evening, and reaction, if it does appear, will probably not be till next day. Skin reactions are not important. Usually all in limbs. Local reactions are rare. If they appear, omit. General reaction is more important, and at once check the dose. If temperature rises to 100°, reduce next dose to ¼ or 1/6 the last dose or omit altogether. Small dose is as good as larger ones; 1 c.c. is often too much. Continue for a year, then omit for a few weeks or months and again renew. Tuberculin is a toxin. Hence care

must be used in the selection of suitable cases, acute types being surely unsuitable. Theoretically, it acts as an enzymogen. It does not fan a smoldering process, but an overdose sets free too much endotoxin. Usually it does most good when general condition of patient is good. But one may use it when other treatment fails. Ambulant patients should be warned to take less than usual exercise after a dose. Weight is but little affected. Blood conditions vary. Phagocytosis is increased. It is antipyretic. Sputa varies. He has seen no hemorrhages follow its use, nor any other bad results. Its use may allow a man to remain at his work, does no harm, but must be in small doses in order to be safe.

DISCUSSION.

DR. FREDERICK SHATTUCK has used tuberculin for the past twelve years in diagnosis in hundreds of cases. He used at first 5 mg., later 10 mg. and 7 mg. in single doses. Lately he has tried the 1/10 mg., 1 mg. and 10 mg. in divided doses, as recommended by Dr. Brown. There are some sources of error, but, on the whole, it is very useful. He has never seen any ill effects, except in one case of Addison's disease, which was rapidly fatal.

DR. THEOBALD SMITH discussed briefly the subject of immunity, which he believes is still quite an unsettled matter. He has tested a series of calves with tuberculin heated only to 60° and can not understand how a bouillon extract which is heated much higher can be efficient.

DR. JOHN B. HAURS, JR., has been using tuberculin at the Massachusetts General Hospital for the past two years in pulmonary and other forms of the disease. He has followed Trudeau's methods. He has seen a reaction with 1/10000 mg. No permanent ill effects and few uncomfortable symptoms have followed its use. In all about 100 cases have been treated for periods varying from two years to two months.

DR. CLEAVELAND FLOYD advises its use for diagnosis only as a last resort and with extreme care. Subcutaneously he has used it in 100 cases. Only two have had a severe reaction. He has heard from Dr. Ross, of Toronto, of two other cases of Addison's disease which have been rapidly fatal after a dose of tuberculin. An ointment of tuberculin has been used, but the simplest test is the conjunctival method. He has tried this 400 times and with no bad result. There is danger, however, of lighting up a tuberculous iritis. Therapeutically, he has used it in the Day Camp of the Good Samaritan Hospital for the past year and a half in 25 patients. All have gained and only one relapsed.

DR. CHARLES DERBY has used the tuberculin at the eye clinics of the Carney Hospital, testing by the conjunctival method 50 cases in the last six months. In treatment about 12 cases have been tried, and all doing well, though not yet cured.

DR. VINCENT Y. BOWDITCH told of his introduction of the method at Sharon and at Rutland after successfully testing it in two cases which had come to a standstill on the fresh air and good food methods. He is deeply impressed with its value, has seen no deleterious results, but believes careful observation is needed, more careful than can usually be given to an out-patient.

MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA

Meeting held March 16, 1908.

DR. WILLIAM M. L. COPLIN in the Chair.

Prevalence of Medical Crime and Fraud.

THOMAS W. BARLOW, ESQ., of the Philadelphia Bar, said it was somewhat difficult for reputable members of the medical and legal profession to point with pride to the records of the Philadelphia police authorities during the past eighteen months with respect to medical crimes and frauds. Out of 35 cases of criminal abortion reported to the coroner's office there have been but three convictions, with prison punishment aggregating six and a half years. In not one case was the maximum punishment inflicted.

It is suggested that the remedy lies in the establishment of separate courts of criminal jurisdiction, and the election of judges exclusively therefor. An effective administration of the law lies in the certainty of conviction and punishment. The movement against medical crimes and frauds Mr. Barlow declared is growing rapidly. The rising tide of public wrath against the sale of alcohol will include a movement against that other rum seller who passes his poison to the community in the guise of medicine. It is said that conditions here are not encouraging to those who wish to supplement police power. Austria is strongly determined to punish illegal practitioners, and in Switzerland "patent medicines" are withdrawn from the protection of the patent laws. It is asserted that lawyers and physicians should unite in a war of extermination of quacks and nostrum vendors.

Lack of Defense of the People Against Medical Criminals and Quacks in Medical Acts.

DR. ALEXANDER R. CRAIG remarked that the object of legislation regulating the practice of medicine is justified solely for the protection of the public, and that if a multiple board of examiners be considered, the number of boards must be increased with every claimed system of treatment, thus multiplying the number of standards of qualification recognized. Of the two general types of law—restrictive and definitive—the state laws of these United States are of the former class, the English law of the latter. Both define the practice of medicine. The former limits the right to practice to those qualified, while the latter only accords recognition to those qualified. Examinations to determine the applicant's qualifications are considered the only means of testing the recent graduate. The three-board law now in effect in Pennsylvania, with other systems asking for boards of examiners, was considered. The suggestion of the Medical Society of the State of Pennsylvania is that the difficulty be overcome by establishing a single board to pass on the qualifications to practice medicine, leaving the phase of medicine or sect to the discretion of the licentiate, believing that the public is interested solely in being protected from ignorance of the fundamental truths underlying the practice of medicine.

Difficulties in the Way of Correct Legislation.

DR. CHARLES MCINTIRE, of Easton, showed that these difficulties have their origin in certain temperamental conditions of which he mentioned three—selfishness, suspicion, prejudice. The purpose of the medical practice act is to secure protection to the citizens of a state from incompetent medical advice. Such act does not consider the convenience of the physician. Medical practice acts, it was said, usually include three things to be done: To secure license to practice the completion of a defined course of study, passing an examination before a state board and registering the license issued. Many medical colleges seek to evade the provisions of the law for reasons best known to themselves, and the public generally are not educated to the thought that scientific knowledge is always necessary for the successful treatment of disease. The lack of trust of one branch of practitioners toward all other branches forms the chief difficulty in the second point, while the unwillingness of one board to accept the certificate of the board of another state places difficulties in the way which do not increase the safeguard of the people. Consequently, it behooves those who would be wise to attempt to frame a law that will recognize these difficulties and minimize the opposition produced by them.

DISCUSSION.

CHAMPE S. ANDREWS, ESQ., of New York City, reviewed the steps leading to the creation of the New York medical law and spoke of its details. Materia medica and therapeutics had been left out because the state said as long as doctors themselves could not decide on a definite standard of therapeutics and materia medica, this question should be left to the individual schools. As one interested from the standpoint of the layman, Mr. Andrews believes that the question of medical legislation, medical examination and medical practice can never be settled until it is settled along the broad general line of one standard for medical men, leaving it to them after they have satisfied the state as to competency to practice in whatever

way they see fit. All medical bills should have two main points in view: one standard of education and, incidentally, how that standard of education is to be established, and provisions in that law that keep it from being a dead letter. It is better to have no law than to allow it to be ignored. Personally, Mr. Andrews is more interested in the features of the law which make it possible to punish those who seek to trade on the dignity of the profession. In eight years, in fighting the quacks of New York City, there have been brought about seven or eight hundred convictions. It was shown that the one board bill of New York provides a series of provisions whereby a man guilty of unprofessional conduct may be summoned to the bar of his own profession, and for conduct not necessarily criminal may have his license revoked, just as lawyers disbar members of their own profession, even though they are safe enough within the law itself.

Knowing that the survival of the quack is impossible without the newspaper, an important item in medical legislation should be the provision that any man, other than a regular physician, shall not advertise to practice medicine. In this way it is obvious that a physician who does advertise is a fraud, and a corporation so advertising is liable to arrest. Medical law must be stiffened up and enforced. There is no higher duty on legislators and private citizens than to endeavor through medical legislation to save the poor and afflicted from being the means of filling the pockets of quacks who prey on them.

MR. BARLOW asked Mr. Andrews to state why the New York County Medical Society considered it necessary to establish a system of carrying on prosecutions, not allowing that to rest with the police power of the city.

MR. ANDREWS replied that unless this work were done by private institutions it would never be done satisfactorily.

DR. JOHN B. MCALISTER said that most of the features of the New York law had been embodied in the act recommended for Pennsylvania, and that special urgency was placed on the recommendation of the one board of examiners.

DR. JOHN B. DONALDSON, of Canonsburg, spoke on the importance of instructing legislators in medical and sanitary matters in connection with proposed legislation, and stated that the average member of the legislature would like to know what his constituents wanted.

DR. SENECA EGBERT thinks that in the new medical law it would be well to provide that a physician who has practiced a certain number of years and is in good standing in his state society should have the privilege of practicing in another state by passing a practical and at times an oral examination. It ought to be easy for a reputable physician to take up practice in another state, and he thinks such an arrangement could be made without detriment to the commonwealth.

Medicolegal

Entitled to Compensation as for Surgical Treatment.

The Supreme Court of Michigan says that the case of Marshall vs. United States Accident Association was brought by the plaintiff, a practicing physician of Muskegon, to recover against the defendant for services rendered to its members under a contract under which the plaintiff agreed to accept as compensation for such services "at the rate of ten per centum (10%) per month for each member enrolled in the Medical Aid Department in the said city of Muskegon who is in good standing, and is entitled to services at the end of each quarter, and for surgical cases the usual scale as adopted by the Physicians' Association of Muskegon County."

On the trial of this case the only question was whether treatment for an abscess on the leg or thigh of a member, which was treated, according to the testimony of the physicians, surgically, was the treatment for which the plaintiff was entitled to receive the usual compensation fixed by the Physicians' Association of Muskegon County, or whether it should be considered medical treatment and compensated as such. The testimony showed, and the circuit judge found, that the treatment given to this case was surgical treatment within the proper meaning of that term. The defendant then sought to show that at a time prior to the execution of the contract, in conversation with an agent of the defendant company, the plaintiff agreed that the treatment of such ailments as an abscess or a carbuncle was contemplated under the term "medical," and would not be considered surgical treatment. The testimony given by the plaintiff very clearly disputed the testimony offered on behalf of the defendant, and afforded an ample basis for the finding of the circuit judge.

The judgment in the plaintiff's favor is affirmed.

President of Coal Company Has Power to Employ Physician.

The Appellate Court of Indiana had, in Cushman vs. Cloverland Coal & Mining Co., a case where a physician asked judgment for $300 on an account for medical and surgical services and for medicines furnished to the defendant company for the benefit of an injured employé. The complaint stated that on a certain date the employé, while at work for the company, was personally injured, his wounds being of so serious a nature as to create an emergency for the immediate attention of a physician and surgeon in order to save his life, by reason whereof the plaintiff was called and employed to attend and treat him by the company, by and through its mine superintendent, which superintendent immediately reported to the company his act. That the company by its president and general manager, with full knowledge of the employment of the plaintiff, ratified and confirmed the same by then and there stating to the superintendent that "that was all right; that was the thing to do." That thereafter the company, by its president and general manager, notified the plaintiff to purchase what was necessary to aid in the further treatment and attention of the injured employé. That the company well knew that the plaintiff was continuing to attend and treat the injured employe, and that the company did nothing toward giving the plaintiff notice that it would not recompense him for his services, but notified the plaintiff that it would recompense him for the same.

The disputed point in the case was whether the complaint showed a liability on the part of the company. The lower court held that it did not. But the Appellate Court holds that it did, and was not, therefore, subject to demurrer.

The Appellate Court says that the averment was that the superintendent who called the plaintiff for the company immediately reported his action to the company, and that the company ratified and confirmed such employment. It was averred that it acted by its president and general manager. It was competent for it so to act. Proof of the fact was, of course, another thing. The power of an agent to bind his principal in matters within the scope of the agency is elemental. In speaking of contracts made by the president of a corporation it has been said "When a contract is made in the name of a corporation, by the president, in the usual course of business, which the directors have the power to authorize him to make, or to ratify after it is made, the presumption is that the contract is binding on the corporation until it is shown that the same was not authorized or ratified."

Coal mining is recognized as a dangerous occupation and numerous provisions for the protection of persons engaged in it have been made by the General Assembly. In mines employing ten or more men it is the duty of the operator to "keep always on hand, readily accessible and near the mouth of the mine, a properly constructed and comfortable stretcher; a woolen and waterproof blanket; a roll of bandages in good condition for immediate use for bandaging and dressing wounds of any one injured in such mine; a supply of linseed oil, lime, camphor, turpentine, antiseptic gauze dressing, and surgeon's splints for the dressing of broken bones; also to provide a comfortable apartment near the mouth of the mine in which any one so injured may rest while waiting transportation to his home, and to provide for the speedy transportation of any one injured in such mine to his home." Section 13, Indiana Act of Feb. 28, 1905.

In view of this legislative requirement it can not very well be said, as a mater of law, that the president of a corporation operating a coal mine has no power to employ a surgeon when

necessary to save the life of an injured employé, nor that such employment can only be made when the injured employé is a pauper. Both self-interest and humanity require that there be some person in authority accessible and authorized to act in such emergency as may arise requiring action.

Appearances and Exclamations as Evidence of Bodily Conditions.

The Supreme Court of Kansas holds, in Federal Betterment Company vs. Reeves, an action brought by the latter party, that, in an action to recover damages for personal injuries, corporal appearances and conduct, as indicating health or the lack of it, are relevant, and such ordinary indications may be testified to by any competent person who was in a situation to know. The looks, appearance and conduct of a person, his ability to labor before and after an alleged injury, are ordinarily competent in determining the effect and extent of the hurt.

In many cases a witness, although not an expert, may be permitted to state the result of his observation, notwithstanding it involves, in a sense, his opinion or judgment, such as the apparent health of a person or other characteristic manifest to the apprehension of a common observer. One who is in a situation to know may testify to the fact whether another is competent to perform manual labor before and after an injury.

Where it is claimed that the disability from such injury continues, the limits of time covered by such evidence must depend on the circumstances of each case, and the probability of intervening changes, and must be left to the wise discretion of the trial judge.

Where the bodily condition of a person is a subject of inquiry, exclamations of present pain or suffering made by the party who claims to have been injured may be received in evidence in connection with his appearance and conduct, where they appear to be the natural and spontaneous expressions of present feeling.

Rights Where a Plaintiff Offers His Body for Examination.

The Supreme Court of Illinois says that, in the personal injury case of Pronskevitch vs. Chicago & Alton Railway Company, all of the plaintiff's clothes were removed from the upper part of his body, and his injuries were exhibited to the jury. The defendant requested the court to require him to submit to an examination by its physicians, in the presence of such witnesses as he might desire, in a private room or some place convenient to the courtroom. The plaintiff expressed a willingness to be examined before the jury by the physicians of the defendant, but not out of the presence of the jury. The trial court refused to compel the examination, and that ruling was assigned as error. The Supreme Court, however, does not think that it was error. This court has held that the court has no power to compel the plaintiff in a personal injury case to submit to a physical examination. The plaintiff having offered his body voluntarily to the inspection of the jury, it then became a subject of examination under such reasonable restrictions as the court might see fit to require. Inasmuch as the plaintiff offered to submit to such an examination, in the presence of the jury, as the defendant might see fit to make, there was no just cause for complaint.

Judges May Require or Refuse to Require Physical Examinations—"Health" Includes Appetite.

The Court of Appeals of Georgia holds, in City of Cedartown vs. Brooks, that it is within the discretion of the trial judge, on a proper showing made therefor and at the instance and expense of the defendant in the action, to require a plaintiff, suing for physical injuries, to submit to an examination by competent physicians in order to ascertain the nature and extent and probable duration of the injury, and to afford means of proving the same at the trial of the cause. It follows that it is likewise within the discretion of the judge to refuse to require such examination, and this discretion will not be controlled unless abused.

It is also said in this case that the term "health" includes appetite.

Current Medical Literature

AMERICAN.†

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 25.

1 Physiologic Mechanism of Vasoconstriction and Vasodilatation. G. B. Wallace, New York.
2 *Therapeutics of Vasoconstriction and Vasodilatation. E. Le Fevre, New York.
3 *Treatment of Endometritis by Irrigation and Drainage. A. H. Goelet, New York.
4 *Sciatica. M. L. Barshinger, York, Pa.
5 Intramural Transplantation of the Round Ligaments Versus Alexander's Operation or Ventro-Suspensio-Fixation of the Uterus for Retroversio-flexion. C. W. Barrett, Chicago.
6 Autointoxication and Indicanuria. A. Abrams, San Francisco.

2. **Therapeutics of Vasoconstriction and Dilatation.**—Le Fevre divides high arterial tension into three stages: 1, Persistent high tension, due to hypertonicity of the muscular coats of the arteries and arterioles; 2, progressive hypertrophy of the cardiovascular muscular tissue with degenerative changes in the intima and arterial fibrosis; 3, diminished muscular control, due to progressive fibrosis causing increased obstruction and cardiac exhaustion. Treatment must take into consideration not only the stage but also the cause. The first stage is the curable one, the indication being to remove the cause or to bring the blood vessels under normal physiologic control. Tobacco, alcohol, improper diet and mental and nervous excitement are among the principal causes. In the second stage, in addition to the factors present in the first stage, there is progressive obstruction from arterial capillary fibrosis. Here it is necessary to determine how much of the obstruction is due to spasm and how much to sclerotic changes. High blood pressure is often a conservative process. Excessive blood pressure does not itself constitute an absolute indication for treatment. Active vasodilators should be used only to meet emergencies—angina pectoris, cerebral disturbances, etc. The effect of vasomotor dilators is not to be gauged entirely by the fall of blood pressure, but also by the patient's subjective feeling and the pulse rate. Le Fevre is convinced that the present inordinate use of vasodilators to control arterial tension is not free from danger of secondary effects in increased tendency of the vessels to spasm on slight reflex irritation. Control of high blood pressure by cardiac sedatives is justifiable only when cardiac hypertrophy is excessive and cardiac overaction occurs under nervous excitement or physical exertion. One of the most valuable methods of treatment lies in measures influencing cutaneous vascular dilatation—baths, counter-irritation and high-frequency currents—or the muscles—massage and restricted exercise. Patients who suffer from anginal attacks on exposure to cold should have the peripheral circulation educated by graded baths. In the bath treatment, however, all the details should be adapted to the individual patient. Massage can render great service. While thyroid extract does have an effect on blood pressure it is a drug that must not be entrusted to the patient. Potassium iodid is much safer, 15 grains (1 gram) daily in divided doses, continued over two or three years, with a week or two's intermission every two or three months.

3. **Endometritis.**—Goelet classifies endometritis as: 1, Catarrhal; 2, septic; and 3, senile. The first two conditions may be either acute or chronic; the third is essentially chronic. Gonorrheal endometritis must be considered apart from other forms of septic endometritis. The fundamental principle in the treatment of endometritis, in whatever form encountered, should be drainage, not of the cavity alone, but of the submucous glands as well. Goelet describes a clinical uterine irrigator of his own devising and details its mode of use. He condemns the indiscriminate application of caustics and irritants to the endometrium, and while not decrying curettage judiciously used, asserts that it must be regarded only as an initial step in the treatment, and never as a curative measure alone.

†Vernal Conjunctivitis: A Correction—The title No. 90 on page 995 of THE JOURNAL, March 31, should read: "90 Vernal Conjunctivitis Showing Unusual Corneal Conditions," instead of "Veronal Conjunctivitis, etc."

4. **Sciatica.**—Barshinger points out that the favorite seat of this affection is the sciatic notch. He describes the anatomy and points out that the pyriformis muscle lies posteriorly to and close on the nerve at that point. Given the usual history of rheumatism, gout, exposure, muscular exertion, or wetting, this muscle becomes the seat of irritation, and consequently of contraction, causing it to impinge on the sciatic nerve. This he regards as a very frequent cause of sciatica. He attaches great importance to physical measures in the treatment, particularly mechanical vibration, radiant energy, static electricity, galvanism and the *x*-ray, the methods of use of which he describes.

Boston Medical and Surgical Journal.

April 23

7 *Orthopedic Heresies on Feet and Their Treatment. L. R. G. Crandon, Boston.
8 Rosenmueller's Fossæ and Their Importance in Relation to the Middle Ear. F. P. Emerson, Boston.
9 *Periosteal Flap for Use in Primary and Radical Mastoid Operations, with Illustrative Case. G. A. Leland, Boston.
10 Case of Caries of the Middle Ear, Mastoid Process and Internal Ear with Extradural Abscess, Pachymeningitis and Destruction of the Semicircular Canals. G. H. Powers, Jr., Boston.

7. **Orthopedics of the Feet.**—Crandon enunciates the following principles as the basis on which he founds his method of treatment in regard to pathologic conditions of the feet: 1, The foot has adapted itself to vicious shoeing conditions and has become a hindfoot or hoof; 2, acute foot symptoms are only a part of general muscular flabbiness and ligamentous relaxation; 3, chronic foot symptoms are due partly to general lack of tonicity and partly to vicious shoes; 4, the reason that some patients get well on using plates is that they develop muscles through trying to get away from the uncomfortable plates; 5, modifications of the plate idea are equally bad; 6, footprints and plaster casts as a means of diagnosis are sources of fallacy; 7, the proper treatment is the education of the patient in standing and walking combined with right shoeing. He considers these points in detail, reproducing from a previous article in the same journal for Nov. 1, 1906, an analysis of proper walking, the underlying principle of which is that the walking foot is not a "hock, arch and hoof," but rather a hand with the heel a grasping talon. The outline of education in brief is parallelism, rather than angularity of the feet; the use of Chinese slippers and bare feet on turf or sand as much as possible to train the prehensile action of the foot and crossed leg walking. Cases are reported and the article is illustrated.

9. **Mastoid Operations.**—Leland refers to the frequency of recurrence, after mastoid operation, which is due to the lack of a deposition of bone in the aditus after operation, so that subsequent infection through the Eustachian tube is not prevented. Often only fibrous tissue lines the bony cavity and encloses flabby granulations, thus presenting an excellent focus for reinfection. Leland first tried rubber tissue, to shut off the aditus, and that failing, resorted to a large flap of periosteum with a broad base to ensure its nourishment. He describes the formation of this flap as follows: The usual curvilinear incision is made through the skin and the superficial muscles down to the fascia. Then the skin is dissected up from the fascia forward, till the depression is reached between the cartilaginous canal and the anterior mastoid wall; backward, it is then dissected upward for something like an inch and a half. With the posterior edge of the mastoid process as a guide, an incision is then made down to the bone, from the tip upward and backward to the junction of the mastoid and occipital bones and then curved somewhat backward and then upward to the level of the linea temporalis; then forward on this ridge or a little above it on the fascia, covering the lower edge of the temporal muscle. If the posterior edge of the mastoid process is strictly followed there will be almost no danger of cutting the mastoid emissary vein. The elevator is then passed down to the bone and this flap, including the periosteum and the fascia and the tissue between, is dissected upward and forward till the anterior edge of the mastoid process is bared, as it is in the ordinary mastoid operation. The flap is then drawn forward by the retractor and the operation completed as usual. After the cavity is thoroughly cleaned out this large flap is drawn backward and its tip pressed down into the antrum so as to cover the aditus, and is there packed rather firmly by gauze wicks. The flap is firmly anchored in position, the posterior part of the cavity being more lightly packed. He has tried this in several acute cases and has found that in almost every instance the flap grows firmly in its new position. He has recently used this method successfully in a chronic case also.

New York Medical Journal.

April 25.

11 *An Original Method of Operating for Congenital Dislocation of the Hip. R. A. Hibbs, New York.
12 *Sudden Blindness and its Various Causes. M. Buchanan, Philadelphia.
13 Radiographic Diagnosis of Renal Lesions. L. G. Cole, New York.
14 Case of Chronic Fibrinous Bronchitis. E. Burvill-Holmes, Philadelphia.
15 Accidents During Anesthesia. E. R. Zemp, Knoxville, Tenn.
16 *Etiology of Psoriasis. B. LeRoy, Athens, Ohio.
17 Management of Typhoid Fever Without a Nurse. L. C. Freeny, Pittsville, Md.
18 Chlorosis Cured by Thyroid Extract. F. K. MacMurrough, New York.

11. **Congenital Dislocation of the Hip.**—Hibbs says that it seemed to him possible that if in extending and abducting the thigh in an attempt to bring the leg back to its former position, parallel to its fellow, some means could be devised by which the head could be forced to travel upward by a more anterior route, a reduction of the dislocation could be secured, as the acetabulum would be directly in the way of the anterior route, assuming that the acetabulum was large enough to receive the head, of approximately normal shape and size. Two things appeared indispensable to the accomplishment of this result: First, absolute control of the pelvis, and, second, an immovable trochanteric pad so shaped and held against the trochanter as to direct the head upward and forward. Such resistance as the capsule or the Y ligament might offer to the reduction would certainly not be increased by such a method and might be diminished, while the muscular resistance, so serious an obstruction to reduction by the Lorenz method, would be entirely avoided, with the injuries not only to the muscles themselves, but often to other important structures, consequent on the application of a force necessary to overcome that resistance. To attain this result he has devised an apparatus which he describes and illustrates, and details the method of use. He has operated by its means on fourteen hips, in thirteen of which he has succeeded in placing the head of the femur in the acetabulum without traumatism. In consequence of this latter factor he confidently hopes the greatest ability of the reduction is thereby secured, the duration of the after-treatment and the wearing of a fixed dressing is lessened and an early resumption of the normal function of the limb secured. In his cases the children have walked, several the day after operation, and all within three days. He considers that cure may be effected more quickly in all cases than by the Lorenz method, and that the upper age limit at which perfect results may be obtained can be increased.

12. **Sudden Blindness.**—Buchanan describes the various causes of sudden blindness in both eyes, in one eye, and of partial blindness sudden in its onset, excluding cases due to traumatism. Binocular blindness is represented by uremic amaurosis, methyl alcohol poisoning, malarial poisoning, quinin, lead poisoning, excessive hemorrhages, particularly from the stomach and transitorily from certain brain tumors, malingering, and mind, psychic, or object blindness. Hysterical blindness is rarely bilateral. Sudden monocular blindness, without inflammation, suggests embolism, detachment of retina, or hemorrhage into the vitreous, also thrombosis of the central retinal vein. These conditions are distinguishable from acute glaucoma by the intense pain and hardness of the eyeball in the latter condition. Hemorrhage into the sheath of the optic nerve may cause blindness, which, however, will disappear on the absorption of the blood. Buchanan discusses these conditions fully with special reference to malingering. Sudden partial loss of vision may arise from conditions similar to those causing complete loss. The author also discusses snow blindness, electric ophthalmia, transitory hemianopsia and chorioiditis.

16. **Psoriasis.**—Leroy considers that he has at last succeeded in obtaining a pure culture of the organism—a mould—which he takes to be the cause of psoriasis, and from which he has made opsonins and successfully treated a patient therewith. He describes his process and the treatment of the case.

Journal of Infectious Diseases, Chicago.

March.

19 *Frequency of Tubercle Bacilli in the Market Milk of Washington, D. C. J. F. Anderson, Washington, D. C.
20 *Pathology of *Amanita phalloides* Intoxication. W. W. Ford, Baltimore.
21 *Gonorrheal Vulvovaginitis in Children. A. Hamilton, Chicago.
22 *Inoculation Treatment of Gonorrheal Vulvovaginitis in Children. Id. and J. M. Cooke, Chicago.
23 *Leucocytotoxins of Normal Serum. H. M. Goodman, Chicago.
24 *Duration and Disappearance of Passive Diphtheric Immunity. Id.
25 *Is the Present Method of Standardizing Diphtheric Serum According to Antitoxin Units Therapeutically Accurate? E. Steinhardt and E. J. Banzhaf, New York.
26 *Relative Therapeutic Value of Antitoxic Globulin Solution and the Whole Serum from Which It Is Derived. Id.
27 *Immunity in Rocky Mountain Spotted Fever. H. T. Ricketts and L. Gomez, Chicago.
28 *Activation of Opsonins in Heated Serum. A. H. Caulfield, Toronto, Ont.

19. **Tubercle Bacilli in Milk.**—Of 272 samples of milk 49, or 18 per cent., were lost by the animal dying in less than three weeks and before sufficient time had elapsed for it to develop tuberculosis. Of the 272 samples 223, or 82 per cent., remained for study. Of the 223 that remained 15, or 6.72 per cent., contained sufficient tubercle bacilli to cause typical tuberculosis in the inoculated animals. Of the samples of milk from 104 dairies, two were lost by acute death of the animals, leaving 102; the milk from 11 of these 102 dairies contained tubercle bacilli; this gives a percentage of 10.7 of the dairies examined showing tubercle bacilli in the milk supplied to their customers. These results, showing that approximately 11 per cent. of the dairies whose milk was examined contained tubercle bacilli virulent for guinea-pigs, do not, however, give a fair idea of the frequency of tubercle bacilli in the market milk of the city of Washington. When two animals were inoculated with the same sample both did not always develop tuberculosis; this might indicate that the bacilli are so few in the amount inoculated that one of the animals, by being a little more resistant, was able to overcome the infection. The amount inoculated, less than 2 c.c. of milk, is a very small portion of a pint bottle. The creamy layer was not inoculated, and other workers have shown that tubercle bacilli are more frequent in this than in the bottom milk; it is very probable that if more animals had been inoculated with the same sample and both cream and sediment had been used, the percentage of positive results would have been very much higher. The results, however, as they were found, are sufficiently high to emphasize the great necessity for the enactment and rigorous enforcement of a law requiring that all cows supplying milk to the District be tuberculin tested and free from tuberculosis. This test, which is now universally recognized as a means of determining whether or not an animal has tuberculosis, should be made by a competent veterinarian, and those animals that respond should be disposed of in some way, so that their milk may no longer be a source of danger to the community.

20. **Amanita Phalloides Poisoning.**—The lesions in fatal cases of *Amanita phalloides* intoxication in man consist of ulcers in the stomach and intestines, hemorrhages in the serous membranes and parenchymatous organs, necrosis of various cells, and fatty degeneration, especially advanced in the liver and kidney. The lesions produced by the whole extract of the fungus consist of gastric and intestinal ulcers, hemorrhages, necrosis of cells, fatty degeneration, hemoglobinuria, and pigmentation of the spleen and other organs. The lesions produced by the amanita toxin consist of gastric and intestinal ulcers, hemorrhages, necrosis and fatty degeneration, and to a certain extent they approximate the lesions seen in man. The amanita hemolysin acts on animals by virtue of its blood-laking properties, producing the hemoglobinuria and the pigmentation of the spleen characteristic of hemolytic intoxications. The amanita toxin is probably the more active principle in alimentary intoxications in man, since it produces experimentally the lesions usually found. The action of the hemolysin can not be ruled out in cases in which large quantities of insufficiently cooked fungi are consumed or when the fungus is eaten raw.

21. **Gonorrheal Vulvovaginitis in Children.**—Hamilton discusses the history, prevalence, modes of infection, predisposing causes, complications and duration of gonorrheal vulvovaginitis in children. A hospital epidemic is described the important points in the history of which are: The apparent predisposition to gonorrheal infection caused by scarlet fever; the fact that no girl over 13 years of age was infected; the total absence of Koplik's non-specific purulent vaginitis; and the fact that the infection was introduced into the hospital by children with vaginal discharge which was apparently non-gonorrheal. In conclusion, a table is appended of the epidemics of gonorrheal vulvovaginitis of children reported in the literature, and also of observations of scattered cases in dispensaries and private practice.

22. **Id.**—As a result of the investigations here recorded by Hamilton and Cooke the following statements are made: The opsonic index to the gonococcus is usually below normal in the chronic gonorrheal vaginitis of little girls and in acute vaginitis during the first weeks. The index rises toward the end in patients who are recovering and remains more or less persistently low in patients who do not improve or who improve very slowly. It is sometimes possible to raise the opsonic index to gonococcus by injections of dead gonococci, and when this occurs an improvement in the clinical condition usually occurs also. The acute cases inoculated with killed gonococci from strains which had been grown for several months on artificial media improved rather more rapidly than did control cases who received no injections of killed gonococci. Better results are obtained by the use of strains which have been grown for a long period on artificial media than by the use of freshly isolated strains, and there appears to be no advantage in using the patient's own organism. While inoculation treatment does not produce a marked effect during the first weeks in acute cases, it seems to shorten the later stages; in chronic cases its effect is more evident than in acute. The substitution of inoculation therapy for local treatment in little girls presents some decided advantages, especially in chronic cases. It is desirable, though not absolutely essential, to control the inoculations by the patient's opsonic index.

23. **Serum Leucocytoxins.**—Normal serum leucocytoxins have a fairly wide distribution. They consist of a thermostabile specific body and a thermolabile non-specific substance. They are distinct from the normal hemolysins, have a different distribution, and are present in considerably smaller amounts of serum. Their action is essentially on the nuclei of leucocytes. They affect all types of leucocytes, but the large mononuclear variety is the most susceptible and the polymorphonuclear form the least susceptible to their action. In diseases associated with a leucocytosis there is an increase in the amount of normal leucotoxin in the serum, this increase corresponding more or less to the extent of the leucocytosis.

24. **Passive Diphtheric Immunity.**—Goodman finds that in passive immunization with diphtheria antitoxin, the degree of protection afforded is always in excess of the protection as calculated from the amount of antitoxin in the blood. Free antitoxin disappears from the blood before immunity is wholly lost by the organism. Diphtheria antitoxin is eliminated by the kidneys, though to but a minor degree. The duration of the protection conferred is practically independent of the quantity of antitoxin administered and the age of the animal.

25. **Standardization of Antidiphtheric Serum.**—The authors conclude that in view of the results obtained in the comparison of the antitoxic content of sera, both preventively and curatively, it is obvious that in diphtheria in the guinea-pig the therapeutic value of antidiphtheric sera depends on the number of antitoxic units present. There is no reason for believing that conditions in man are different. Contrary to certain claims recently advanced, antidiphtheric serum contains no protective substances, aside from the antitoxin, which play an important rôle therapeutically. The present method of standardizing antidiphtheric serum accurately measures its therapeutic value.

26. **Antitoxic Globulin Solution.**—The experiments recorded indicate that the therapeutic value of the plasma is not appreciably impaired through the process of eliminating the albumins and other nonantitoxic proteins by the salting out methods employed, and the final dialyzation of the concentrated product.

27. **Rocky Mountain Spotted Fever.**—Ricketts and Gomez show that an attack of spotted fever in the guinea-pig and monkey produces a strong active immunity of long duration. This immunity is characterized by the presence of protective antibodies in the serum which may be demonstrated by injecting mixtures of virus and immune serum. The concentration of the antibodies in the blood of the immune animal undergoes a decrease in the course of several weeks. The female that has recovered from spotted fever transmits immunity to her young. The young are immune even when the female acquired her immunity several months before impregnation. The immunity of the young does not depend on the ingestion of milk from the immune mother. Passive immunity may be established in the healthy guinea-pig by the injection of blood or serum from the immune guinea-pig. The immune defibrinated blood contains antibodies in such concentration that 0.1 c.c. often protects against 1 c.c. of third-day virus, representing from 30 to 100 minimum pathogenic doses. In other instances 0.3 or 0.4 c.c. of immune blood are required for this degree of protection. When 1 c.c. of strong immune blood is injected subcutaneously into healthy guinea-pigs, the passive immunity is still present in marked degree after 20 days; after 38 days it is present only in such degree that a mild course of spotted fever results when the virus is injected; after 45 days it is no longer manifest. It is possible that passive immunity would not last so long if the immune blood were injected into a foreign species. The guinea-pig may be protected against spotted fever following its inoculation with infected blood, provided the immune blood is administered on the second or third day after inoculation. The curative power of the immune blood or serum is low, and in order to produce a distinct effect it is necessary to begin its administration early in the disease and to give relatively large quantities. By mixed immunization or sero-vaccination, in which virus and immune blood or serum are mixed in suitable proportions, it is possible to immunize the guinea-pig by one or several injections with the result that he is thereafter immune to infection. The blood of animals immunized in this way contains protective antibodies in fairly high concentration and in the case of females the immunity is transferred to the offspring. The quantity of antibodies produced by this method of immunization probably is in proportion to the severity of the febrile reaction which follows the administration of the immunizing dose. However, strong immunity caused only a barely perceptible febrile reaction. It may be possible to use the immune serum from the horse, which is shown to be susceptible to inoculation, for the prevention of the disease in man. For this purpose the serum should be injected in sufficient quantity within two or three days following the bite of the tick. Such an injection should not be considered protective for a longer period than three weeks. The method of sero-vaccination is not yet sufficiently perfected to warrant its application to man, but the subject is being studied further in order to determine its safety and efficiency. There is no hope of obtaining a stronger serum for curative purposes than that yielded by an animal which has recently recovered from the disease, until the micro-organism can be cultivated artificially, thus making available a desirable quantity of antigens for immunization. Even with this condition realized the results of further immunization can not be anticipated, but must await experimental determination.

28. **Activation of Opsonins.**—Wright's heated serum test is briefly as follows: Both the immune and normal sera are heated for ten minutes at 60 C. and the phagocytic index taken. It will usually be found that the sera from cases infected with tuberculosis retain their phagocytic power in marked contrast to the heated normal sera whose indices are usually nothing or at most found in the second decimal place (as 0.05). Thus there is induced in the serum of the patient undergoing autoinoculation a thermostabile substance capable of producing phagocytosis. Occasionally this substance is not demonstrable in undoubted cases. This loss of phagocytosis was investigated by Caulfield by adding a fourth volume of complement (in the form of fresh diluted rabbit serum). Under these conditions the sera from infected cases gave a diagnostic phagocytosis while the loss of phagocytosis of normal sera was unaffected.

Bulletin of the Johns Hopkins Hospital, Baltimore.

March.

29 Albrecht v. Haller: Scientific, Literary, and Poetical Activity, J. C. Hemmeter, Baltimore.
30 Primary Hemangiomata of Muscle. J. S. Davis, Baltimore.
31 *Pulmonary Complications Following Anesthesia. O. B. Wight, Portland, Ore.
32 *Relation of the Parathyroid to Calcium Metabolism and the Nature of Tetany. W. G. MacCallum and C. Voegtlin, Baltimore.

31. **Pulmonary Complications of Anesthesia.**—Wight discusses lobar pneumonia, bronchopneumonia, bronchitis and pleurisy consequent on anesthesia. He finds that the lobar pneumonia following anesthesia differs from that commonly seen in the medical wards in lower and more irregular temperature, shorter and rarely a true crisis, greater freedom from complications, central type, lung signs developing late and cough not marked or severe, and sputum rarely blood tinged. He discusses the various theories of causation, stating, however, that in most cases more than one is necessary to explain the origin: 1. Irritant action of anesthetic; ether is the most irritant, chloroform the least. 2. Aspiration of mucus and vomitus and hypersecretion of mucus. He regards the preanesthetic administration of atropin as valueless. 3. Emboli; that these constitute a factor is doubtless true, but other factors must bear part. 4. Toxic effect of anesthetic on heart and blood vessels; chloroform is the most dangerous. 5. Presence of pneumococci and other bacteria in mouth and throat. 6. Extension of infection through subdiaphragmatic space. 7. Cooling of the body; a loss of temperature from half to one degree may follow prolonged anesthesia without any other factor, but the cold table, wet towels about the site of incision, irrigating solution, and other conditions under the surgeon's control, are sometimes responsible. 8. Limitation of lung expansion. 9. Lessened resistance of the patient. Prevention lies in disinfection of the mouth and nose as a routine measure, and administration of the anesthetic by the open drop method with the head low and to one side, and the jaw kept forward. The patients must be kept warm and dry by warm pads, jackets and leg covers. Patients should be warmly covered on removal from operating table to bed.

32. **The Parathyroid and Calcium Metabolism.**—MacCallum and Voegtlin publish a preliminary note on a study of the calcium metabolism of animals in which tetany is produced by parathyroidectomy, and of the relations of various salts, especially those of calcium, to the tetany thus produced. They say that all violent symptoms produced by parathyroidectomy, muscular twitching and rigidity, tachypnea, fibrillary tremors, increased rapidity of the heart beat, etc., may be almost instantly cured by the intravenous injection of a solution of a calcium salt. They have usually employed the acetate or lactate in 5 per cent. solution. Subcutaneous injection or the introduction of the solution into the stomach are quite as effective but act more slowly. The condition of complete well-being attained in this way lasts for perhaps twenty-four hours, when tetany may reappear, but disappears immediately on renewed administration of calcium. Injection of magnesium salts has a somewhat similar effect in causing the symptoms of tetany to disappear, but the results are obscured by the toxic anesthetic action of the salt. On the other hand, the injection of potassium salts in tetany not only causes no amelioration, but actually intensifies all the symptoms.

Military Surgeon, Carlisle, Pa.

March.

33 *Plague in India. A. H. Moorhead, Indian Medical Service.
34 *Benjamin Rush's Directions for Preserving the Health of Soldiers with a Note on Surgeon Ebenezer Alden. H. P. de Forest, National Guard, N. Y.
35 *Notes and Statistics of the Year's Service at the United States Marine-Hospital, San Francisco. H. W. Austin, U. S. Public Health and Marine-Hospital Service.

36 *Instruction in the Physiology of the Circulation. R. S. Woodson, U. S. Army.
37 Necrology of the Association for 1907. S. C. Stanton, Ill. National Guard.
38 Heat Exhaustion on Men-of-War. M. S. Elliott, U. S. Navy.

33. **Plague in India.**—In an interesting paper Moorhead describes the history of plague in India from its first appearance in Bombay in 1896. He details the sequence of events in an infected village, and gives the results of experiments conducted by the Bombay plague commission. In regard to fleas he states that both male and female rat fleas transmit the disease, and that: "A most important point is the nasty habit it has of squirting blood from the intestines at the same time that it is sucking in blood, and curiously, this is the most probable way it gives infection to its host, because the bite of the flea is irritating and is usually scratched and thus the discharged contents of the flea's intestine, now proved to contain abundant *Bacilli pestis*, are rubbed into the punctured wound caused by the flea in the act of biting. Plague bacilli have been found in stomachs of rat and human fleas." The marked seasonal prevalence and decline of the disease in India is thus explained. The hot weather causes the disease to decline, no doubt, mainly, because the virulence of the disease among rats diminishes, and because the fleas die off and the population live more in the open and sleep outside their houses. The former idea that the dung plastered huts were a factor in maintaining plague has since been disproved by the commission, which shows that plague bacilli in cow dung floors of native huts not only do not multiply, but soon die out altogether. The bacilli of plague may number as many as 100,000,000 per c.c. in the blood of the rat, and a flea's stomach may easily contain 5,000 of them. The plague bacillus was found not to lose its virulence by a series of inoculations and subcutaneous injections into rats. Moorhead shows the difficulty of dealing with plague among the people, or rather the many peoples, of India, who are ignorant, suspicious and distrustful, and with whom any measure taken that will change their ordinary routine of life is sure to fail. He considers the future outlook for Europe a serious problem. In eleven years the disease has spread through the whole of India and he has no doubt will next infect Afghanistan and Persia, on its northwest frontier and adjacent to Russia, and the former countries are not likely to adopt more vigorous measures than have been taken in India. Wherever the plague-carrying rat and its flea can travel and live, the disease is sure to spread, and he believes it will reach Europe over land. The later methods of dealing with it are evacuation, inoculation and rat destruction. The latter does not seem to have been successful in Japan. Inoculation shows excellent results as a preventive and as decreasing the severity of the attack; the disadvantage is that it confers immunity only for one season. He describes the difficulty in obtaining the cooperation of the people, not arising, as among more civilized races as a mere matter of individual indifference which can be startled in an emergency into action, but as a matter of superstitious and traditional opposition. He describes the outbreak, course and conquest of an epidemic in a native regiment, the principal factor being the strict isolation of the sick and evacuation of the cantonments, the regiment going into camp. Buboes in the groin were opened and treated antiseptically early, and drained to prevent absorption of poison. Strength was supported by diet and stimulants, and medicinally large doses of carbolic acid freely diluted, as much as eight grains twice or thrice daily, were given internally. The remaining treatment was symptomatic. The mortality under this treatment was 65 per cent., which is considered satisfactory.

34. **Rush and the Health of Soldiers.**—De Forest writes an interesting historical article and gives a photographic reproduction of a pamphlet containing directions for preserving the health of soldiers, by Benjamin Rush, published in 1728, by order of the board of war. It formerly belonged to Dr. Ebenezer Alden, of whom a biographic note and portrait are appended.

35. **The United States Marine Hospital at San Francisco.**—Austin gives a statement of the work done at this hospital that affords abundant evidence of the great public value of the United States Public Health and Marine-Hospital Service.

36. **Physiology of the Circulation.**—Woodson describes and figures a syringe with two rubber bulbs used to demonstrate the mechanism of the systemic and pulmonic circulation.

Journal of Nervous and Mental Diseases, Lancaster, Pa.

March.

39 Case of Recurrent Autohypnotic Sleep, Hysterical Mutism and Simulated Deafness; Symptomatic Recovery with Development of Hypomania. B. Oettinger, Denver, Colo.
40 A New Diagnostic Sign in Recurrent Laryngeal Paralysis. A. A. Allen, Philadelphia.
41 Case of Matricide and Attempted Suicide with Brief Psychologic Analysis. W. K. Walker, Dixmont, Pa.
42 *Nature and Relationships of Hysteria. R. C. Woodman, Middletown, N. Y.

42. **Hysteria.**—Woodman concludes his article on the nature and relationships of hysteria by saying that it is enough if through the concept of hysteria the physician's mind may be freed from a too exclusive pathology of toxin and cell change. The recognition of hysteria as a psychosis tends to bridge the gap which has been allowed to grow between diseases of the body and diseases of the mind, and to give a wider outlook and a new point of view from which to regard the other insanities. It makes it possible to correlate the insanities with what most physicians in their practice and thought regard as nervous diseases, and through them the physician and the patient's friends can come to some conception of what goes on in the insane person's mind, and of how such insane thoughts can arise and be entertained. It need not be supposed that the hysterical process is the only one through which mental aberrations occur. Rather in the past its rôle has been almost totally overlooked. The studies in hysteria should be applied to the problem of insanity, and the functional element sought in every mental disorder, and its mechanism be made clear if possible, whether it be hysterical or some other as yet unnamed type of reaction.

Archives of Pediatrics, New York.

March.

43 Meningococcus Hydrocephalus. F. Huber, New York.
44 *Kernig's Sign in Infancy; Study of 2,000 Cases. J. L. Morse, Boston.
45 Case of Congenital Biliary Cirrhosis—Congenital Obliteration of the Bile Ducts. J. P. C. Griffith, Philadelphia.
46 *Caloric Value of Modified Milk in Its Relation to Infant Feeding. M. Ladd, Boston.
47 Peripheral Phlebosclerosis in Childhood. C. F. Martin and J. A. C. Tull, Montreal.
48 Case of Chylothorax in a Child. C. G. Jennings and H. M. Rich, Detroit.
49 Use of Traction in Treatment of Hip-Joint Disease in Children. E. J. Wynkoop, Syracuse, N. Y.
50 Carbohydrate Incapacity in Infants and Young Children. C. G. Kerley, New York.

44. **Kernig's Sign in Infancy.**—Morse reports a study of 2,000 cases, which lead him to the conclusion that Kernig's sign is almost never found in infancy, either in health or disease, except in meningitis. It is found so rarely in other diseases at this age that its presence in acute disease justifies, so far as any one sign can, the diagnosis of meningitis. It is never present, however, in some cases, and in many others it is present only intermittently. It occurs with equal frequency at all stages of the disease. It has no apparent connection with the degree of intracranial pressure. It is more often present when the knee jerk is increased than when it is diminished. It is of no value in the diagnosis between the tuberculous and cerebrospinal forms of meningitis.

46. **Caloric Value of Modified Milk.**—Ladd reports a series of observations which lead him to various conclusions, the substance of which is that the caloric value of the food, expressed either in terms of the number of calories ingested daily or as the energy quotient, is not the most important consideration in determining the quality of an infant's food. While such calculations can be easily made, they add nothing in the way of information which can not be obtained by careful observation of the gastric and intestinal functions and the weekly gain in weight.

The American Journal of Physiology, Boston.

April.

51 *Some Effects of the Cardiac Nerves on Ventricular Fibrillation. W. E. Garrey, San Francisco.
52 *Glucose in Saliva. A. J. Carlson and J. G. Ryan, Chicago.
53 *Resistance to Lack of Oxygen. W. H. Packard, Peoria, Ill.

54 *Direct Utilization of the Common Sugars by the Tissues H. McGuigan, St. Louis, Mo.
55 *Glycolysis. H. McGuigan, St. Louis.
56 Resuscitation. F. H. Pike, C. C. Guthrie and G. N. Stewart, Chicago.

51. **Ventricular Fibrillation.**—By ventricular fibrillation is meant a state in which fibers of the muscle of the ventricle contract independently of each other in an incoordinated manner, so that no effectual contraction of the whole heart results. Garrey has studied the effect of the cardiac nerves on this condition, which he produced by faradization of the heart muscle. The vagus and accelerans were found to have opposite effects. Stimulation of the accelerans favored the production of fibrillation. Stimulation of the vagi hindered or prevented occurence of fibrillation, and at a certain stage was capable of restoring the heart to coordinated action. In all cases, however, a state could eventually be reached from which stimulation of the vagus was no longer able to restore the coordinated rhythm of the heart. In such states the abnormal condition was amenable to Hering's potassium chlorid treatment. Section of the vagi favored the production of fibrillation and in some cases actually induced it. These results were obtained only on dogs and, even in this species, failed in normal animals, indicating that the abnormal heart may act differently from the normal, and that one species of animal may respond to such treatment when another will not.

52. **Glucose in Saliva.**—Carlson and Ryan find a small percentage of glucose in the saliva. This glucose is derived from the blood and is proportionate to the amount contained in the blood, although the proportion varies somewhat in the secretion derived from the various glands.

53. **Resistance to Lack of Oxygen.**—In a previous paper Packard has shown that the ordinary sugars, when injected into the body cavity of the common minnow, increase the animal's resistance to a lack of oxygen. He continues these experiments, using mannose, fats, alcohol and pilocarpin. Mannose acted like other sugars; fats had practically no effect. Alcohol, in high concentration, killed the animals. In dilutions above 1 per cent. it decreased the resistance to lack of oxygen, probably by impairing the power of respiration in the tissues. Its action was proportionate to the strength of the solution. Alcohol showed itself less toxic to fishes than to higher animals. Acetone acted like alcohol. Pilocarpin, in strengths of from 0.05 to 0.1 per cent., caused a decrease in the power of resistance to lack of oxygen.

54. **Utilization of Sugars.**—McGuigan reaches the following conclusions: 1. The living muscles of an animal when perfused with dextrose, levulose or galactose, cause a rapid oxidation of these sugars. 2. The results with maltose would indicate that little, if any, of it is oxidized directly by the muscle. 3. Increasing the amount of sugar in the perfused blood increases the amount oxidized. 4. Stimulation of the muscles during the perfusion increases the oxidation. 5. The perfusion of dead muscles shows practically no loss of sugar. 6. Both in living and dead tissues perfusion causes an edematous condition. This occurs very much sooner and to a greater degree in the dead tissues. 7. The perfused liver also utilizes the common sugars. It is probable that this will hold for all glandular organs. 8. The glycogen-storing function of the liver is lost in perfusion much sooner than the sugar-destroying function. The same statement holds for the muscle. 9. The glycolysis occurring in drawn blood at 40 C. in two hours is very small in amount.

55. **Glycolysis.**—Muscle extract is incapable of causing more than an insignificant destruction of sugar. It has been claimed by Cohnheim that oxidation takes place if extract of pancreas is mixed with the muscle extract. McGuigan concludes from his experiments that mixtures of muscle and pancreatic extracts are as inert in glycolysis as the muscle extract alone. He considers glycolysis a function of living tissues only.

American Journal of Surgery, New York.

March.

57 Significance of Abdominal Tenderness in Locating Lesions of Viscera. T. C. Withersnoon, Butte, Mont.
58 *Induction of Premature Labor in Amaurosis and Amblyopia in Connection with the Albuminuria of Pregnancy. T. R. Pooley, New York.
59 *Use of the Automobile in Surgical Practice. W. B. Reid, Rome, N. Y.
60 Postoperative Treatment of Adenoid Patients. B. de F. Sheedy, New York.
61 Blood Examination in Surgical Diagnosis: Practical Study of Its Scope and Technic. (To be continued). I. S. Wile, New York.
62 Stricture of the Esophagus Treated by Gastrostomy and Retrograde Dilatation by Ochsner's Method. F. W. Parham, New Orleans.
63 Case of Ununited Fracture of the Shaft of the Humerus and Paralysis of the Musculospiral Nerve. D. Eve, Nashville, Tenn.

58. **Premature Labor and the Albuminuria of Pregnancy.**—Pooley cites an array of figures and facts which lead him to conclude that, in extreme cases in which the sight is either lost, or the risk of its loss is imminent, the induction of premature labor, or even abortion, is justified and even demanded. It may be justified in certain cases of uremic amaurosis, neuroretinitis with grave organic lesion of the optic nerve, and in cases in which permanent affections of vision have occurred in a previous pregnancy.

59. **The Automobile in Country Surgery.**—Reid points out that the lighting in country houses is frequently one of the great difficulties of emergency surgery. He reports an instance in which he was enabled to convert the kitchen into a very satisfactory operating room by backing up his automobile to the window, passing the searchlight lamp into the kitchen, and connecting it with the gas tank on the automobile by means of rubber tubing. The light was as good as in any well-appointed operating room.

Cleveland Medical Journal.

March.

64 Brief Survey of the Development of Physiologic Knowledge from the Time of the Reformation to the Beginning of the Nineteenth Century. J. J. R. Macleod.
65 *Intrauterine Pregnancy Indefinitely Prolonged. N. S. Scott, Cleveland.
66 Gastric Ulcer with Report of Cases. M. J. Lichty, Cleveland.
67 Duration of Disability in Injury and Disease. H. S. Mathewson, U. S. Public Health and Marine-Hospital Service.
68 *Studies in Aneurism. (Concluded.) J. G. Mumford, Boston.

65. **Prolonged Intrauterine Pregnancy.**—Scott reports a case in which a fetus was removed piecemeal, presumably fourteen months after the beginning of pregnancy. The diagnosis was made in the course of an operation for appendectomy and exploration of the uterus as a consequence of the history. The development of the fetus was probably five months, corresponding to the period when a miscarriage had threatened consequent on an attack of grip, and from which time all fetal movements ceased. Ordinarily speaking, when a fetus is not expelled at the time of death it is usually expelled at the expiration of the ninth month. Scott reviews the literature of prolonged retention of the fetus. He considers that his case refutes the conclusions drawn by many of the authorities, in that a prolonged intrauterine pregnancy occurred in a young, reasonably vigorous primipara, without any apparent etiologic factor, such as tumor or bicornate uterus, or other pathologic lesion or anatomic anomaly. The fetus seemed to be undergoing the changes incident to the formation of a lithopedion. There is no reason for thinking that the condition might not have continued indefinitely, provided sepsis did not supervene. Lastly, the case terminated in a complete recovery as the outcome of the simple but timely operation, dilating and curetting.

68. **Aneurism.**—Mumford concludes in this issue his interesting and critical studies in aneurism, with a reference to the operation of Matas, whose work on aneurism he considers the first worthy of prominent record since the days of John Hunter. He describes the history of the Matas operation and emphasizes certain points often misapprehended, misquoted or ignored. The fundamental purpose of Matas' scheme in all cases is closely to suture all arterial openings within the aneurism. Though Matas has suggested such a step, which Mumford considers not necessary, Matas' plan does not embrace a reconstruction of the artery out of the sac in fusiform aneurism. His operation differs radically from that of Antyllus, in that the latter, by tying the main artery above and below the aneurism, left to chance the settlement of two important elements in the problem: In certain cases he ran the risk of cutting off by his ligatures small but essential col-

laterals, whose presence would safeguard against gangrene; on the other hand, he failed to eliminate those extra arterial feeders of the aneurism which, as well as the main artery, sometimes pour blood into the sac. The sac, too, is often adherent to surrounding structures and carries important vessels and nerves in its walls. Matas explains how he folds it in on itself and preserves it entire as a crumpled but vital mass. Thus all possible tissue of value is preserved, all harmful arterial streams are held in check, and every vascular avenue which may share in bearing needed supplies of blood is encouraged to take up its vicarious duties.

Journal of the Michigan State Medical Society, Detroit.

March.

69 Gastric Disturbances Caused by Hernia. M. Ballin, Detroit.
70 *Preventive Medicine in Its Relation to Pneumonia. F. W. Shumway, Lansing.
71 Conservative Treatment of Inflammatory Pelvic Conditions. R. Parmeter, Detroit.
72 Surgical Operations on the Head. L. S. Griswold, Big Rapids.
73 *Organization of a State Antituberculosis Association. A. S. Warthin, Ann Arbor.

70. Pneumonia and Preventive Medicine.—Shumway considers the facts actually known and established, in relation to pneumonia as a preventable disease, the attitude of the State Board of Health thereto, and the relation of the medical profession to its prevention.

73. Antituberculosis Association.—Warthin discusses the function of a state antituberculosis association in regard to literature, lectures, publicity, exhibits, legislation and conference, and also its relation to the national association. He describes the meeting of organization of the Michigan state association and its constitution.

Laryngoscope, St. Louis.

March.

74 *Researches on the Voice. E. W. Scripture, New York.
75 Probable Function of the Malleus, Incus and Stapes. O. Greenberg, Milwaukee.
76 Remarkable Case of Sigmoid Sinus Thrombosis with Multiform Septico-Pyemic Complications Extending Over a Period of Four and a Half Months. J. R. Winslow, Baltimore.
77 The Vicious Circle of the Nose; the Rationale of Sinus Inflammations and Their Treatment. W. L. Ballenger, Chicago.
78 Management of Suppuration of the Middle Ear Based on Analysis of 100 Consecutive Cases Seen in Private Practice. W. S. Bryant, New York.
79 President's Address, American Laryngological, Rhinological and Otological Society, 1907. W. C. Phillips, New York.
80 A New Bronchoscope. C. Jackson, Pittsburg.
81 Retention in the Maxillary Antrum of an Iron Bolt, for a Period of Four Years, Without Important Unpleasant Symptoms. J. O. McReynolds, Dallas, Texas.

74. The Voice.—Scripture describes three methods of studying the voice: the graphic method, and those by the phonograph and gramophone. His studies show that the prevailing views of speech and the action of the vocal organs are largely erroneous. The view that the larynx contains the two cords or membranes swinging in the breath current and setting the air in vibration is not true. The larynx contains the two vocal lips which open and shut by compression; it thus emits a series of puffs of air, as a locomotive or siren does, but so fast that the puffs make a tone. Moreover, the vocal cavities do not, as generally supposed on Helmholtz's theory, act like brass resonators, reinforcing over tones. The cavities are adjusted to certain tones for each vowel; the puffs from the larynx strike them and bring forth these tones. Two incidental points of interest are noted: First, when the alphabet is spoken certain movements of the tongue are registered for each letter. These movements are reproduced in a lesser degree when the subject, instead of speaking the alphabet, merely thinks it, trying to keep his tongue still. Secondly, the epileptic has a distinct type of speech which the ear can learn to recognize and use as a diagnostic test.

West Virginia Medical Journal, Wheeling.

March.

82 *Operative Treatment of Uterine Retrodisplacement. R. J. Reed, Wheeling.
83 Cocain Anesthesia. R. E. Vickers, Huntington.
84 Diphtheria in Adult. H. P. Linsz, Wheeling.
85 Ophthalmia Neonatorum. C. B. Williams, Philippi.
86 Circumcision Under Cocain and Adrenalin Chlorid. J. N. Simpson, Morgantown.
87 Enuresis in Children. C. S. Hoffman, Keyser.
88 Medical Organization. C. A. Wingerter, Wheeling.

April.

89 Annual Address Before the West Virginia Medical Association. F. Howell, Clarksburg.
90 Surgical Clinics of Europe. J. E. Cannaday, Charleston.
91 Treatment of Empyema of the Maxillary Sinus Through the Inferior Meatus. T. W. Moore, Huntington.
92 Heredity. R. M. McMillen, Wheeling.
93 The Realization of Our Ideals. A. C. McKay, Hansford.
94 Relation of the Minister to the Physician. W. J. Holmes, Wellsburg.

82. Uterine Retrodisplacements.—Reed considers that there is but one surgical procedure founded on a scientific basis, the Alexander operation, which, however, is applicable only in uncomplicated retrodisplacements. It requires a precision of diagnosis attained by few, as to the absence of complications. With regard to the other operations, any will prove satisfactory, save as it relates to the child-bearing period. Notwithstanding the wide popularity of ventrosuspension, he adduces arguments against it, and particularly that in ventrosuspension of the uterus a pregnancy will destroy the work of the operation or the work of the operation will destroy the pregnancy, or surround it with grave dangers. He then describes a technic based on the Alexander idea, but carried out from within the cavity in four easy steps after an abdominal section in the median line, which has been perfected through the efforts of a number of American surgeons.

Mississippi Medical Monthly, Vicksburg.

March.

95 *Handicaps in Negro Practice. T. M. Dye, Sherard.
96 Gonorrhea. L. W. Bayne, Hattiesburg.
97 *Case of Gallstone. H. C. Buck, Friars Point.

April.

98 Technic of Brain Surgery. S. G. Wilson, Brookhaven.
99 Suggestion, Simple and Hypnotic. J. J. Slack, Friars Point.
100 Benefits of Exercise and Plain Food During Pregnancy. B. F. McNeal, Ezra.

95. Negro Practice.—Dye discusses the obstacles to negro practice. The principal ones are the negro's efforts to lead the physician to an erroneous diagnosis—he seems to have a delight in fooling the doctor if possible; an utter inability to understand and follow directions; the interposition of outsiders, who dissuade from obedience to instructions; the undying fondness for filling his belly; his morbid dread of water; his poverty and filth, and fondness for night prowling and sexual excesses. No reputation built on negro practice is secure.

97. Gallstones.—Buck reports a case of gallstone and incidentally expresses his conviction that calomel has no effect on the liver, so far as increasing or diminishing the secretion of bile goes, but that it does affect the duct and cause an increased flow of bile into the intestine.

Illinois Medical Journal, Springfield.

March.

101 *Modern Treatment of Pulmonary Tuberculosis; Principal Agencies Employed. J. W. Pettit, Ottawa.
102 *The Heath Mastoid Operation Whereby the Disease is Cured and Hearing Restored. W. L. Ballenger, Chicago.
103 Medical Organization and the North Central Illinois Medical Association. W. O. Ensign, Rutland.
104 Diagnosis and Treatment of Commoner Injuries of the Eye. W. E. Gamble, Chicago.
105 The Trend in Modern Medicine. E. P. Cook, Mendota.
106 Drugs in Diabetes. A. R. Elliott, Chicago.

101. Pulmonary Tuberculosis.—Pettit describes the details of treatment as carried out at the Ottawa Tent Colony, in reference to fresh air, food, exercise and tuberculin, the last of which he regards as neither a specific nor a substitute for the hygienic-dietetic treatment, but nevertheless a valuable adjunct, when indicated, in conjunction with the usual methods. Its value in localized lesions where its action can be observed, is unquestioned.

102. The Heath Mastoid Operation.—Ballenger describes clearly and in detail this modified, radical mastoid operation which does not include exposure of the middle ear. The ten patients in whom he has used it have shown great improvement in hearing, the curative effects being as good as those obtained by radical operation. It should be performed in most cases of chronic ear discharge; it is not a formidable operation.

Iowa Medical Journal, Des Moines.

March.

107 Report of the Chairman of the Section on Medicine of the Iowa State Medical Society. R. J. Nestor, Waterloo.
108 Pneumonia in Children. W. J. Bradley, Cedar Rapids.

109 Hysteria. S. Bailey, Mount Ayr.
110 Use of Food in Treatment of Disease. G. H. Clark, Waterloo.
111 Etiologic Classification of Leukemia. W. L. Bierring, Iowa City.
112 Idiopathic Splenic Enlargements. Splenic Anemia. W. W. Bowen, Fort Dodge.
113 *Anesthesia Fatalities in Iowa. L. W. Littig, Iowa City.
114 Pneumonia. G. E. Crawford, Cedar Rapids.
115 Case of Bronchial Calculus. J. B. Robb, Russell.

113. Abstracted in THE JOURNAL, Feb. 1, 1908, page 395.

Kentucky Medical Journal, Bowling Green.

March.

116 Osteomyelitis. J. G. Carpenter, Stanford.
117 Case of Abdominal Pregnancy. C. R. Garr, Flemingsburg.
118 Use and Abuse of Forceps. G. H. Freeman, Piano.
119 Differential Diagnosis of Membranous Croup and Diphtheria. W. L. Mosby, Bardwell.
120 Two Cases of Membranous Croup, Intubation in Each Case, and Recovery. L. B. Cook, Stanford.
121 Hydrocephalus-Face; Presentation; Rupture of Uterus. J. C. Brice, Flemingsburg.
122 Work of County Society Officers. J. W. Crenshaw, Versailles.
123 The Doctor's Duty to the Laity. A. W. Cain, Somerset.
124 The Laity's Duty to the Doctor. Id.

April.

125 *Exophthalmic Goiter. J. G. Cecil, Louisville.
126 *Surgical Treatment of Goiter. T. C. Holloway, Lexington.
127 A Pharmacologic Consideration of the Thyroid Gland. V. E. Simpson, Louisville.
128 Local Health Records. R. L. Woodard, Hopkinsville.
129 A Few Suggestions to the Young Practitioner. E. B. McMorries, Clinton.
130 Preparation and After-Treatment for Surgical Operations. B. F. Van Meter, Lexington.

125 and 126. Abstracted in THE JOURNAL, Nov. 9, 1907, page 1625.

Journal of the Missouri State Medical Association, St. Louis.

March.

131 Salpingitis. J. G. Sheldon, Kansas City.
132 *Law and Lawyers: Their Failure to Cope with Modern Medicolegal Exigencies. J. Punton, Kansas City.
133 Art of Prescribing. J. C. Matthews, Springfield.
134 Removal of Ureteral Calculi. W. Bartlett, St. Louis.
135 Reflections Concerning the General Practitioner. J. R. Buchanan, Nevada.

132. This article appeared in the *St. Louis Medical Review*, December, 1907, and was abstracted in THE JOURNAL, Feb. 1, 1908, page 402.

Therapeutic Gazette, Detroit.

April.

136 Treatment of Rheumatism in Children. J. P. C. Griffith, Philadelphia.
137 Medical Treatment of Gonococcus Infection in Women. E. McDonald, New York.
138 Treatment of Hemorrhoids Under Local Anesthesia. J. H. Maynard, Adair, Iowa.
139 Treatment of Uncinariasis in Porto Rico. F. D. Patterson, Philadelphia.
140 *Treatment of Pelvic Abscess. F. C. Hammond, Philadelphia.
141 Six Cases of Gonococcic Arthritis Treated with Antigonococcic Serum. A. Perez-Miro, Havana, Cuba.
142 Wiring Operation in Treatment of Aneurism of the Aorta. H. A. Hare, Philadelphia.

140. Abstracted in THE JOURNAL, Nov. 16, 1907, page 1706.

Dominion Medical Monthly, Toronto.

March.

143 Public Health Act of Ontario; Medical Practitioners and Medical Health Officers. L. J. A. Hythenrauch, Appin, Ont.
144 Menstrual Disorders of Young Women. J. Burke, Manitowoc, Wis.
145 *The Aseptic Hospital Floor. C. J. Fox, Washington, D. C.
146 Lysol as an Application in Smallpox. H. C. Jamieson, Glencoe, Ont.
147 Acute Nephritis. W. C. Abbott, Chicago.
148 Vivisection. A. MacPhail, Montreal.

April.

149 Case of Patient Suffering from Heart Block and Delusion of Infection of Skin by Insects. G. Chambers, Toronto.

145. A similar article by the same author appeared in the *Yale Medical Journal*, November, 1907, and was abstracted in THE JOURNAL, Feb. 8, 1908, page 433.

Western Medical Review, Omaha.

April.

150 Ablatio Placentæ. A. P. Overgaard, Fremont, Neb.
151 Suprapubic Prostatectomy. A. L. McKinnon, Lincoln, Neb.
152 Thirteen Cases of Prostatectomy with Complications and Sequelæ. A. C. Stokes, Omaha.
153 Diagnosis and Treatment of Inevitable and Incomplete Abortion. F. A. Long, Madison, Neb.
154 Twelve Cases of Extragenital Syphilis. E. J. Angle, Lincoln.
155 President's Address Before Laramie County Medical Society. W. A. Wyman, Cheyenne, Wyo.

Northwest Medicine, Seattle.

March.

156 Injection Treatment of Neuralgia. B. Hahn, Seattle.
157 Aseptic Midwifery. R. A. Gove, Tacoma, Wash.
158 Pelvic Contraction as a Factor in Labor. R. M. Purman, Seattle.
159 Treatment of Asthma with Diphtheria Antitoxin, Death Following Its Administration. P. W. Willis, Seattle.
160 Treatment of Partial Optic and Retinal Atrophy by Electricity and Massage. (Concluded). H. V. Würdemann, Milwaukee.

Lancet-Clinic, Cincinnati.

April 18.

161 Bacteriotherapy. O. Berghausen, Cincinnati.
162 The Psychasthenic States. C. W. Hitchcock, Detroit, Mich.
163 Arthroplasty for Ankylosis, with Report of Cases. H. J. Whitacre, Cincinnati.

Maryland Medical Journal, Baltimore.

March.

164 Prevention of Tuberculosis Among School Children. H. B. Jacobs, Baltimore.
165 Playground as an Aid in the Prevention of Tuberculosis. G. E. Johnson, Pittsburg.
166 Prevention of Tuberculosis in the Schools. H. W. Steele, Baltimore.

Vermont Medical Monthly, Burlington.

April.

167 Hematuria. L. Davis, Boston.
168 Home Treatment of Tuberculosis. H. H. Lee, Wells River.

American Journal of Urology, New York.

March.

169 Prostatic Hypertrophy. F. Cabot, New York.
170 Acute Bacterium Coli Infection of the Bladder. C. G. Cumston, Boston.
171 Three Cases of Cystitis Treated with Gomenol. C. L. Wheeler, Lexington, Ky.
172 Spasmodic Hysteric Retention of Urine. G. P. LaRoque, Richmond, Va.

April.

173 The Ureter in Fused (Horse-Shoe) Kidney. B. Robinson, Chicago.

Colorado Medicine, Denver.

March.

174 Venesection: Its Commoner Indications. H. B. Whitney, Denver.
175 Opsonic and Bacterial Vaccine Experiences. G. B. Webb, Colorado Springs.
176 Recent Advances in the Physiology of the Digestive Tract. E. B. Queal, Boulder.
177 Causes of Death in the City and County of Denver for 1907. E. Lawney, Denver.

American Practitioner and News, Louisville.

April.

178 Simple Anemia in Children. P. F. Barbour, Louisville.
179 Case of Herpes Zoster Lumbo-Femoralis. J. V. Shoemaker, Philadelphia.
180 Inflammation of the Nasal Accessory Sinuses. W. Cheatham, Louisville.

Yale Medical Journal, New Haven.

March.

181 Diagnostic Significance of Retention Fever. L. W. Bacon, New Haven.
182 Chronic Gonorrheal Prostatitis. P. D. Littlejohn, New Haven.
183 Influence of General Conditions on Accident Cases. C. E. Bedell, New York.

Journal of Cutaneous Diseases, New York.

April.

184 Frambesia Tropica (Yaws, Pian, Bouba). A. Castellani, Colombo (Ceylon).
185 Zittmann's Decoction. D. W. Montgomery, San Francisco.
186 Provisional Nomenclature of the American Dermatological Association. A. Rose, New York.

The Ohio State Medical Journal, Columbus.

April.

187 Injuries to the Elbow. L. G. Bowers, Dayton.
188 Cerebral Pneumonia. S. P. Wise, Millersburg.
189 Reflex Disturbance of Digestion. R. H. Grube, Xenia.
190 Lipomatosis. J. J. Thomas, Cleveland.
191 Tuberculous Laryngitis. A. B. Thrasher, Cincinnati.
192 Oculist's Records for Ten Years at the Ohio State School for the Blind. J. E. Brown, Columbus.
193 Urethral Caruncle. C. M. Harpster, Toledo.
194 Extensive Lupus of the Face and Nasal Canal. M. Metzenbaum, Cleveland.

Denver Medical Times.

April.

195 Three Cases of Pernicious Malarial Paroxysm Occurring in Colorado. J. N. Hall, Denver.
196 The Vermiform Appendix. F. L. Dixon, Denver.
197 Perforation of the Intestines by Swallowed Pin. F. M. McCartney, Denver.

198 Health of the City of Denver. W. H. Sharpley, Denver.
199 Law of Anesthetic Accommodation. C. G. Parsons, Denver.
200 Diagnosis and Treatment of Scarlet Fever. J. D. Crisp, Denver.

Utah Medical Journal, Denver.

April.

201 Vesical Irritability Due to Hyperacidity of Urine and Method for Diagnosing the Condition. W. T. Hasler, Manti.
202 Blood Examination: Its Value as a Diagnostic Measure. F. O. Reynolds, Springville.
203 Surgical Treatment of the Prostate Gland. E. Viko, Salt Lake City.

Journal of the Kansas Medical Society, Columbus.

April.

204 Injuries to the Abdominal Viscera, Due to Blows, Kicks, Crushes and Similar Accidents. E. E. Liggett, Oswego, Kan.
205 Lesions of the Motor Tracts of Cerebrum. C. C. Goddard, Leavenworth.
206 Cholera Infantum. C. S. Kenney, Norcatur.
207 Our Professional Standing. J. R. Scott, Independence.
208 Case of Pemphigus. R. E. M'Vey, Topeka, Kan.
209 Parasitic Diseases of the Skin and Their Treatment. J. R. Lytle, Richmond, Kan.

Indiana Medical Journal, Indianapolis.

March.

210 Repair of Divided Tendons. N. E. Jobes, Indianapolis.
211 Diagnosis of Rectal Diseases. A. B. Graham, Indianapolis.

April.

212 Purposes and Limitations of the Hospital. E. Walker, Evansville.
213 Lumbar Puncture; Its Value as a Diagnostic and Therapeutic Procedure. J. V. Reed, Indianapolis.
214 Fissure in Ano. A. B. Graham, Indianapolis.
215 Case of Spina Bifida; Operation and Recovery. E. K. Pfaff, Mooresville, Ind.
216 The American Medical School and Its Entrance Requirements. D. S. Jordon, Berkeley, Cal.

Montreal Medical Journal, Montreal.

March.

217 Giant-Celled Rhabdomyoma, Sarcoma from the Trout. J. G. Adami, Halifax.
218 Experimental Work Arteriosclerosis. O. Klotz, Halifax.
219 Trypanosomes in Montreal Rats. Id.
220 Chart for Study of Congenital Cardiac Diseases. M. E. Abbott, Montreal.
221 Cultural Features of New Pathogenic Micro-organism of the Conjunctiva. H. McKee, Montreal.
222 Ovarian Dermoid Tumor Communicating with Rectum. W. Gardner, Montreal.
223 Unilateral Congenital Absence of the Paired Genitourinary Organs. J. McCrae, Montreal.
224 Biliharziosis. R. P. Campbell, Montreal.
225 Mediastinal Sarcoma with Extensive Involvement of the Heart. C. F. Martin, Montreal.
226 Blue Baby, 17 Years Old. N. Viner, Montreal.
227 Tuberculoma of the Tongue. E. M. v. Eberts, Montreal.
228 Hypopion Iritis, Associated with Epidemic Cerebrospinal Meningitis. F. Tooke, Montreal.
229 Vincent's Angina. A. H. Gordon, Montreal.
230 Perforation of Gall Bladder from Erosion by Calculus. E. J. Williams, Sherbrooke.
231 Appendix in Inguinal Canal and Scrotum. Id.
232 Modifications of the Treatment of Cystitis in Women, with Report of 45 Cases Treated Cystoscopically. E. McDonald, New York.

Virginia Medical Semi-Monthly, Richmond.

March 13.

233 Clinical and Practical Points About Prostatectomy. R. C. Bryan, Richmond.
234 Splenic Abscess. E. T. Brady, Abingdon, Va.
235 Deviation of the Nasal Septum: Disturbances, Causes, Treatment. D. A. Kuyk, Richmond.
236 Office Treatment of Gynecologic Cases. G. Baughman, Richmond.

April 10.

237 Pathology and Etiology of Cancer. J. S. Horsley, Richmond.
238 Differential Diagnosis of Ectopic Pregnancy. C. R. Robins, Richmond.
239 Amebic Dysentery in the Southern States. T. B. Boggs, Baltimore.
240 Duty of the Physician to His Obstetric Patients. O. P Schaub, Roxboro, N. C.
241 The Ureter. R. C. Bryan, Richmond.
242 Simple and Easy Way to Remove a Collapsed Eyeball. D. D. Willcox, Petersburg.
243 Sanitary Villa on a Peak of the Appalachians. J. A. Burroughs, Asheville, N. C.
244 Principles of Surgery. S. McGuire, Richmond.

Texas State Journal of Medicine, Fort Worth.

March.

245 Glioma of Both Retinæ. Result of X-Ray Treatment. E. H. Carey.
246 Cancer of the Breast—Diagnosis, Prognosis and Treatment. B. Saunders. Fort Worth.
247 Relationship That Should Exist Between Physician and Druggist. C. E. Cantrell, Greenville.
248 Pelvic Abscess Resulting from Appendicitis. J. E. Thompson, Galveston.
249 Instruction of Women on the Questions of Sex, Venereal Diseases and the Early Detection of Cancer. M. Duggan, San Antonio.
250 Appendicitis—Some of Its Complications and How to Prevent Them. J. P. Runyan, Little Rock, Ark.

Louisville Monthly Journal of Medicine and Surgery.

April.

251 Pneumonotomy and Drainage in Abscess of the Lung. W. O. Roberts, Louisville.
252 Case of Tuberculosis of the Kidney. J. G. Sherrill, Louisville.
253 Management of Varicose Veins. A. D. Willmoth, Louisville.

Journal of Ophthalmology and Oto-Laryngology, Chicago.

March.

254 Jequirity in Trachoma. R. W. Gillman, Detroit.
255 Improvised Operating Room in Ear, Nose and Throat Practice. D. T. Vail, Cincinnati.
256 Formidin in Ear, Nose and Throat Surgery. J. F. Barnhill, Indianapolis.

April.

257 Ocular Disturbances the Result of Dental Disease. A. K. Higgs, Portland, Ore.
258 Papilloma of the Conjunctiva, Successfully Treated with X-Ray. T. Faith, Chicago.
259 Subjective Sensations of Smell and Their Significance. H. Kahn, Chicago.

Journal of Outdoor Life, Saranac Lake, N. Y.

March.

260 Outdoor Life in California. P. K. Brown, San Francisco.
261 Prevention of Tuberculosis. G. H. Kress, Los Angeles.

April.

262 Prevention of Tuberculosis Among School Children. H. B. Jacobs, Baltimore.
263 Cooperation that Counts. J. A. Cleary.
264 Modern Sewage Disposal Plant. L. Rosenberg, New York.

The Ophthalmic Record, Chicago.

March.

265 Probable Tumor of the Pituitary Body Without Giantism But Exhibiting a Binasal Hemiopia. C. A. Wood, Chicago.
266 Diaphanoscopy in Glaucoma. H. V. Würdemann, Milwaukee.
267 Case of Nonvascular Parenchymatous Keratitis. F. A. Davis, Denver, Colorado.
268 Paracentesis of the Anterior Chamber in Inflammatory Processes of the Uveal Tract. R. Denig, New York.
269 Argyrosis Due to Argyrol. F. Krauss, Philadelphia.
270 Ocular Paralyses and Their Diagnosis. E. M. Alger, New York.
271 Six Cases of Phlyctenular Conjunctivitis Associated with Diplobacillary Conjunctivitis. H. McKee, Montreal.
272 An Improved Retinoscopical Mirror. A. A. Bradburne, Southport, Great Britain.
273 Possible Use of Atoxyl and Other Preparations of Arsenic in Sympathetic Ophthalmia, Trachoma and Syphilitic Affections of Eye. H. Gifford, Omaha.
274 New Pterygium Knife. H. B. Young, Burlington, Iowa.
275 Mittendorf's Lens-Spots. H. Gifford, Omaha, Neb.
276 Syphilitic Paralysis of Accommodation. L. Emerson, Orange, N. J.
277 Ulcerative Keratitis Probably Due to Trophic Change. J. W. Pancoast, Philadelphia.
278 Surgical Interference in Choked Disc. E. Stieren, Pittsburg.
279 European Eye Clinics and Their Clinical Opportunities. A. F. Horwitz, Chicago.
280 Methods of Muscular Advancement. S. Klein, Büringen, Germany.

April.

281 Use of the Ocular Transilluminator (The Würdemann Lamp). H. V. Würdemann, Milwaukee.
282 Ocular Tuberculin Reaction. F. M. Brawley, Chicago.
283 Optic Neuritis Due to Chronic Empyema of the Frontal and Anterior Ethmoidal Sinuses. W. A. Murray, Minneapolis.
284 Binocular Exophthalmos Recovery. S. D. Risley, Philadelphia.
285 Case of Probable Cerebellar Tumor Treated by Tuberculin Injections. H. B. Young, Burlington, Iowa.
286 Simple and Effective Instrument for Cauterizing Corneal Ulcers. F. C. Todd, Minneapolis.

Alienist and Neurologist, St. Louis.

February.

287 My Conception of Hysteria and Hypnotism (Pithiatism). J. Babinski, Paris.
288 The Fount of Evil. A. S. Ashmead, New York.
289 Case Showing Constitutional Defects. E. M. Somers, Ogdensburg, N. Y.
290 "La Phobie du Regard." C. H. Hughes, St. Louis.
291 Summary of the Pathologic Findings in 147 Autopsies Performed at the Central Indiana Hospital for the Insane. C. F. Neu, Indianapolis.
292 Ailourophobia as Symptom of Psychasthenia. C. H. Hughes, St. Louis.
293 The Milwaukee Morbid Kleptophile. Id.
294 Dementia Senilis and Opinion Evidence. Id.
295 Inadequate Precautions Concerning the Insane. Id.
296 Medical Rank and Command in the Navy. Id.

Archives of Ophthalmology, New York.

March.

297 Report of a Pathologic Examination of a Case of Acute Primary Glaucoma. A. Knapp, New York.
298 Glaucomatous Excavation of the Lamina Cribrosa Without Excavation of the Papilla and with Marked Papillitis, in Case of Acute Inflammatory Glaucoma. B. Pusey, Chicago.
299 Affections of the Optic Nerve During Pregnancy. A. Knapp, New York.
300 Nail from a Shotgun Cartridge, which Spontaneously Came Out from Under the Eyelid, Where It Had Been Lodged for Eight Years, Without Damage to the Patient. J. S. Fernandez, Havana, Cuba.
301 Interstitial Keratitis After Use of Calmette's Ocular Reaction. A. Knapp, New York.
302 Oxide of Copper in the Cornea. E. G. Rust, Cleveland.

303 Particles of Glass as Foreign Bodies in the Lens. Prof. Laquer, Strasburg, Germany.
304 Xeroderma Pigmentosum. C. Velhagen, Chemnitz, Germany.

Ophthalmology, Milwaukee.

April.

305 Three Cases with Ocular Manifestations of Tertiary Syphilis in Colored Subjects. W. C. Posey and F. Krauss, Philadelphia.
306 Centune System, Percentage or Nomenclature of Angles. E. E. Maddox, Bournemouth, England.
307 Insufficient Pigmentation as Cause of Eye Diseases. C. E. Woodruff, Fort Wadsworth, New York.
308 Vibratory Massage in Eye Diseases. L. Connor, Detroit.
309 Morax-Axenfeld Conjunctivitis. Analysis of 300 Cases. H. McKee, Montreal.
310 The Evil Eye Among the Hebrews. A. Brav, Philadelphia.
311 Verhoeff's Astigmatic Charts. J. Green, Jr., St. Louis.
312 Relation of the Eye and the Nose. H. C. Parker, Indianapolis.

International Clinics.

Vol. I. Eighteenth Series.

313 The Sanatorium. L. Brown, Saranac Lake, N. Y.
314 Treatment of Syphilis by Injection of Soluble Salts of Mercury. J. Dardel, Aix-les-Bains, France.
315 Clinical Aspects of Blood Coagulation. T. R. Boggs, Baltimore.
316 Value of Opsonic Test for Diagnosis and of Employment of Vaccines in Infective Conditions in Children. A. D. Fordyce, Edinburgh, Scotland.
317 Paratyphoid Fevers. J. C. Wilson, Philadelphia.
318 Urinary Acidity with Reference to Gastric Acidity. Acid and Alkaline Tides in Urine Denied. A. L. Benedict, Buffalo, N. Y.
319 Textural Proclivities and Immunity; the Personal Factor in Medicine. Sir D. Duckworth, London, England.
320 Mucous Colitis. D. Sommerville, London, England.
321 Normal Temperature of the Body. R. D. Rudolf, Toronto, Canada.
322 Diseases of the Gall Bladder. J. B. Deaver, Philadelphia.
323 Practical Deductions from Series of Operations for Perforated Gastric and Duodenal Ulcer. B. T. Tilton, New York.
324 Resection of Shoulder Joint for Suppurative Disease of Bone. J. G. Sherrill, Louisville, Ky.
325 Import of Digestive Disturbances in the Diagnosis of Surgical Lesions of the Abdomen. L. Frank, Louisville, Ky.
326 Fixation Abscesses. J. Thiroloix, Paris, France.
327 Care of the Newborn. H. E. Tuley, Louisville, Ky.
328 Perfected Surgical Treatment of Fibroid Tumors of the Uterus. L. S. McMurtry, Louisville, Ky.
329 Fracture of the Spine. G. L. Walton, Boston.
330 Mode of Infection in Tuberculosis. L. F. Flick, Philadelphia.
331 Etiology of Hemoglobinuric Fever. W. H. Deaderick, Marianna, Ark.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

April 11.

1 *Treatment of Fractures of the Patella of Long Standing. Lord Lister.
2 The Pygmy and Negro Races of Africa. F. C. Shrubsall.
3 *Diagnosis and Treatment of Malignant Disease of the Prostate. J. W. T. Walker.
4 Fifty Cases of Stovain Analgesia by the Intraspinal Injection. L. H. McGavin.
5 *Renal Hemorrhage in Chronic Interstitial Nephritis. J. T. McNab.
6 Treatment of Disease and Deformity Due to Scar Tissue. J. Snowman.
7 Labor in a Case of Triple Pregnancy. V. Z. Cope.
8 Abnormality of the Liver Simulating a Thoracic Tumor. E. A. Elder and J. E. Postlethwaite.
9 The Cell as a Factor in Phagocytosis. H. W. Bayly.
10 *Cures for Asthma: Fatal Case from an Overdose of Oil of Sage. H. T. M. Whitling.
11 Motoring Notes. C. T. W. Hirsch.
12 Peter of Abano. C. E. A. Clayton.

1. Fractures of Patella.—Lister publishes, for the first time, in a letter to a physician written in 1895, a method of dealing with old standing fractures of the patella. When complete approximation can not be brought about, he wires the fragments in the following manner: Making a sufficient vertical incision from the free convex border of each fragment extending a little beyond the fractured border, the upper fragment is drilled from without inward with two holes. A sufficient length of wire is then threaded through both holes in such fashion that when the ends are pulled on, the loop of the wire will rest on the upper surface of the fragment. The lower fragment is also drilled with two holes. Through the lower incision the soft tissues are detached by means of a raspatory from the femur between the two incisions, and a forceps passed upward seizes the two ends of the wire and brings them out through the lower wound. The lower fragment is then wired from within outward. The limb is brought into a vertical position to give all natural help in approximation of the fragments, and a strong sharp hook passed through the attachment of the quadriceps to the upper fragment, aids in its drawing down. When the fragments have been drawn as close together as possible, the ends of the wire passed from within outward in the lower fragment are secured in the usual way. After dressing the limb the vertical position is still retained for two or three days and then gradually reduced an inch or two at a time to the horizontal. After some time, in which the patient uses the limb, it will be found that the fragments can be approximated, and the lower incision is then opened and the fragments wired through the existing holes in the usual manner with two interrupted sutures or a continuous wire suture, which, however, Lister does not prefer, as it may tilt the fragments so that their anterior edges do not come together.

3. Malignant Disease of the Prostate.—Walker discusses the diagnosis of malignant disease of the prostate, based on a consideration of 242 consecutive cases of prostatic enlargement, of which 57 were diagnosed as malignant. Of these he discards 17 as among the doubtful class, the other 40 leaving no room for criticism. This gives a proportion of 16.5 per cent. of malignant growths. Simple and malignant growths begin about the same time, so that age is of little value diagnostically, save that cases beginning much before 50 are likely to be malignant. Difficult micturition is the cardinal symptom. Next to that comes frequency. Pain was slightly less often present than the preceding symptoms; it was the initial symptom in 10 cases. The frequent absence of hematuria is a misleading feature. Emaciation occurred in 15 cases and then was slight. Extensive infiltration of the rectal wall caused obstruction of the bowel in two cases. Walker compares these symptoms with those of diseases most likely to be confused with cancer—simple enlargement, stricture of the urethra, some diseases of the spinal cord. He describes the mode of examination of the patient and of rectal examination. As to treatment, many cases are too far advanced on diagnosis to permit of more than relief of symptoms—the occasional passage of a good sized metal bougie to relieve difficult micturition; this should be avoided, however, if hematuria is present. Catheter life may be necessary; also opium may be needed for pain. The methods of operation open to choice are suprapubic enucleation and perineal operations, perineal prostatectomy and total extirpation of the prostate, prostatic urethra, seminal vesicles and bladder base (Young's operation). He describes these operations.

5. Renal Hemorrhage in Nephritis.—Macnab concludes from his investigations that renal hemorrhage is not at all uncommon in the course of chronic interstitial nephritis, and differs from other hemorrhages occurring in the disease, as it often appears very early. This leads to difficulty in diagnosis, but may enable cases of chronic nephritis to be recognized sooner than they otherwise would be. Medical treatment is, as a rule, sufficient to control the bleeding, but recurrence is probable. Surgical treatment may be necessary in rare cases of severe hematuria occurring early in the disease.

10. Poisoning by Oil of Sage.—Whitling describes a fatal case of poisoning from taking two drams of oil of sage by mistake. The characters were those common to poisoning by all essential oils—inhibition of the pneumogastric, epileptiform convulsions, cyanosis. This should be remembered, as oil of sage is sometimes used with the view of causing abortion.

British Medical Journal, London.

April 11.

13 *Treatment of Fractures of the Patella of Long Standing. Lord Lister.
14 *Rational Treatment of Functional Dyspepsia. R. Hutchison.
15 Physiology of the Emotions. F. W. Mott.
16 *Clinical Value of the Pancreatic Reaction in the Urine. C. Watson.
17 *Therapeutic Uses of Normal Serum. E. C. Hort.
18 Hysterectomy Performed on a Patient with Glycosuria. J. D. Malcolm.
19 Irish Poor-Law Medical Service. J. W. Boyce.
20 The Attendance Prize System: Its Relation to the Spread of Disease in Elementary Schools. R. P. Williams.

13. See abstract No. 1.

14. Functional Dyspepsia.—Hutchison divides functional dyspepsias into four forms, corresponding to the four physiologic

functions of the stomach, viz.: 1, Secretory; 2, motor; 3, sensory, and 4, absorptive. The last being a limited function, is dismissed. Functional dyspepsias, therefore, fall into the following classification:

1. Secretory.. { Excess: hyperchlorhydria and hypersecretion. / Defect: hypochlorhydria and achylia.
2. Motor..... { Excess: pyloric spasm. / Defect: atony and motor insufficiency.
3. Sensory.... { Excess: hyperesthesia. / Defect: (?) anorexia and diminished capacity.

Any one of these forms may occur alone, but frequently one finds two or more coexisting. Hutchison discusses the treatment of each form in detail. In excessive secretion the indications will be best met by a regimen into which milk, eggs, meat and fish enter freely, while the starchy foods are kept within strict limits. Medicinally, neutralizing drugs, of which the earthy oxids (magnesia is to be preferred) should be given when the secretion is excessive, i. e., about two hours after meals. In defective secretion the actual composition of the diet is indifferent, provided it be given in a suitable mechanical form. Medicinally, the indications are to stimulate the natural secretion or to replace it artificially. The bitters effect the first end, alone or with small doses of sodium bicarbonate. The second, theoretically, would be attained by administration of ferments, but in practice this has proved to be almost worthless. Full doses, say ½ a dram (2.0 gms.) of the dilute hydrochloric acid, after meals, are sometimes of service in restraining some of the secondary symptoms, e. g., "gastric" diarrhea. In the excess form of motor disorder the dietetic treatment must consist mainly of milk supplemented by soft farinaceous foods; medicinally, antacids, bismuth, antispasmodics, e. g., carminatives, and especially opium in small doses before meals, are indicated, with local fomentations, etc., to the epigastrium. Motor defect calls for avoidance of all hard, tough, indigestible food, and of fluids, the diet being dry; medicinally, muscular tonics are indicated—strychnin, alcohol, mineral acids, certain aperients, particularly aloes. Massage, perhaps electricity, and hydrotherapeutics are useful measures. Anesthesia is the only sensory disorder of which we have any knowledge. Blandness should be the characteristic of the diet, while medicinally we have many gastric sedatives, especially bismuth, the bromids, hydrocyanic acid, hyoscyamus, cannabis indica, chloral and chloroform. Also the local application of heat is useful here also. While these lines will not always be successful, Hutchison holds that this is the only way of approaching this disorder that can be called rational and scientific.

16. **The Pancreatic Reaction.**—Watson sums up his conclusions practically as follows: The results of his researches confirm the conclusion arrived at by Mayo Robson and Cammidge, that there is a definite and important relationship between the pancreatic reaction in the urine and disease of the pancreas. They differ from those of Cammidge, in so far that he has recorded a higher percentage of positive results in cases similar to those that may have been included in that author's list of control cases. He divides the cases in which the pancreatic reaction was present into the following groups: 1. A group in which there was definite clinical or pathologic evidence of serious organic disease of the pancreas—for example, acute and chronic pancreatitis, usually associated with disease of the bile ducts. 2. A group in which the reaction in the urine is associated with pronounced arterial sclerosis, a condition usually accompanied by more or less sclerosis in different glands. 3. A group in which the reaction is dependent on congestion and catarrhal conditions of the gland ducts and substance, with associated toxemia; for example, advanced heart disease, appendicitis, pneumonia and malaria. This division is, it is hardly necessary to add, somewhat arbitrary, as most cases are in ail probability of mixed origin. If these facts are kept in view, and their urinary reaction is carefully studied along with the other clinical features of a case, Watson has no hesitation in saying that this new test will prove of great value to physicians and surgeons in the diagnosis and treatment of pancreatic disease.

17. **Normal Serum.**—Hort reports a number of cases of the use of normal serum to combat the ulceration and destruction of tissue that characterize many diseases, and which are supposed to be due to a deficiency in the patient's serum of bodies that normally restrain autolysis. The cases are remarkable illustrations of the inhibiting power of the serum. The action of normal serum would appear, Hort thinks, to be the sum of the two opposing actions of an antilytic and auxilytic body.

Medical Press and Circular, London.

April 8.

21 *Three Cases of Inoperable Cancer of the Rectum. W. Alexander.
22 Maladies of the Heart. Sir J. Sawyer.
23 Pelvic Tuberculosis. R. D. Purefoy.
24 Gallstones Removed from the Pancreas. P. J. Fagan.

21. **Cancer of the Rectum.**—Alexander describes an operation performed by him in a case of inoperable cancer of the rectum in 1887, which operation with certain modifications he has continued to perform since. It essentially resembles Kraske's operation, save that instead of removing one side of the sacrum it removes the last two pieces entire, as well as the coccyx. The patient lived and did good work as a laborer for thirteen years, dying subsequently of intercurrent bronchopneumonia, without recurrence of the growth. Alexander now does a preliminary inguinal colotomy, which has a distinct advantage in diverting the feces from their normal passage over the diseased mass, so that the diseased part shrinks in size, becomes less painful and more movable, and irritation and inflammation subside. He allows a month to elapse before doing the radical operation. In this operation the anal opening is first stitched up tight, leaving a loop of silk free to manipulate the bowel with during operation. An incision starting from the level of exit of the fourth sacral nerve in the middle line along the sacrum and coccyx up to within half an inch of the anal margin, sweeps around the anus. The coccyx and the two lower pieces of the sacrum are then denuded from superjacent tissues and removed with bone forceps. The string controlling the rectum is held, and with the scissors the muscles and fascia are snipped through as they appear. The peritoneum may be opened and the proximal part followed up as far as necessary. The proximate part of the healthy bowel is clamped and the diseased part cut away, a Paul's tube being tied in the proximate end. The healthy bowel is stitched high up to the peritoneum and the lower end just above the Paul's tube is sutured to the skin. This operation affords ample room for complete removal of all the diseased tissues.

Bristol Medico-Chirurgical Journal.

March.

25 *Suppurative Disease in the Nose and Ear. P. W. Williams.
26 Typhoid Fever and Typhoid Carriers. D. S. Davies and I. W. Hall.
27 *Operative Interference in Carcinoma of the Pancreas. J. Swain.
28 *Treatment of Spreading Peritonitis by Drainage, the Fowler Position, and Rectal Instillation of Saline Solution. C. H. Whiteford.
29 Rupture of Middle Meningeal Artery: Operation; Recovery. G. M. Smith.
30 Abdominal Fibroma Simulating Splenomegaly. D. A. Alexander.

25. **Suppurative Disease of Nose and Ear.**—Williams describes in detail the anatomy of the accessory sinuses, and discusses the symptoms of chronic suppuration in them and the connection between so-called nasal mucous polypus and nasal suppuration; his own opinion being that probably obstruction arises in the lymphatic vessels, owing to the invasion of microorganisms. The presence of multiple polypi, he says, is strong evidence of the existence of suppuration in one or more of the accessory sinuses. He discusses the treatment, including that by opsonic vaccines. In regard to the latter, while finding it impossible to say how far improvement in his cases was attributable to the vaccines, he considers the results at any rate sufficient to encourage resort to the method in certain cases. He describes various operations, including an osteoplastic one of his own for gaining access to the ethmoidal cells, the sphenoidal sinus, and the frontal sinus, without destroying the nasal bone or leaving a depressed pit below the bridge. He also describes a plan by which the presence of pus in the sphenoidal sinus can be determined. This consists of passing a

fairly fine cannula, with a blunt trocar, under anesthesia, along the floor of the nose until it impinges against the posterior pharyngeal wall; then the distal end is carried forward along the roof of the nasopharynx till it slips up the anterior wall to a point about ¼ inch above the lower border of the anterior wall of the sphenoidal sinus. On slight pressure it readily penetrates the thin anterior wall. A syringe is then substituted for the trocar and the contents aspirated or boric acid solution is thrown in.

27. **Carcinoma of Pancreas.**—Swain reports cases all treated by cholecystenterostomy by means of the Murphy button. Early operation is necessary, as one of the objects is to forestall the occurrence of cholemia and toxemia. The absence of pruritus is a great gain in this operation as against cholecystostomy. He does not consider it of much importance whether the gall bladder is attached to the duodenum or the colon, other things being equal. He advocates the Murphy button strongly, as reducing the mortality and shortening time in the operation. The male part, being the heavier, should be placed in the intestine, thus favoring the fall of the button into the intestine when it becomes loose.

28. **Spreading Peritonitis.**—Whiteford describes a case and comments on the advantages of a swing for retaining the patient in a semi-sitting position, practically after the method of Mayo Robson and Moynihan; the use of Moynihan's flexible pewter tube for administering saline solution by rectum; the use of morphin hypodermically when operation has been decided on, to conduce to the patient's comfort and, by lessening peristalsis, to check the spread of infection; the Fowler position; the preference for ether anesthesia; the desirability of shortening the operation as much as possible, and the importance of keeping the patient in a semi-erect position before, during and after operation.

Journal of Obstetrics and Gynæcology of the British Empire, London.

March.

31 Paul and Peter Chamberlen? J. W. Ballantyne.
32 *Infantile Breast Tissue. C. N. Longridge.
33 *Hebotomy or Pubiotomy, with Notes of a Case. R. Jardine.
34 *Need of Clinical and Pathologic Investigation into the Nature and Causes of the Common Gynecologic Ailments. W. E. Fothergill.
35 Case of Tuboabdominal Gestation: Death of Fetus at Full Term: Removal of Fetus and Placenta Two Months Later. W. Tate.
36 Lithopedion, Retained Fifteen Years, Causing Acute Intestinal Obstruction. J. W. Smith.
37 Symphysiotomy Performed Three Times on the Same Patient. R. Jardine.
38 Unusual Degree of Cystic Degeneration of the Cervix. M. H. Phillips.
39 Case of Gangrene of the Leg from Thrombosis During Pregnancy. R. Jardine.
40 *Low Implantation of Placenta with Tough Membranes, Causing Prolonged First Stage of Labor in Primiparæ. K. Das.

32. **Infantile Breast Tissue.**—Longridge describes, by means of nine microscopic sections, the development of the infantile breast. He is engaged in trying to collect information as to whether the mother is always a successful nurse in cases in which the infant's breast also secretes. He has failed to find any definite connection between the not uncommon blood stained vaginal discharge of female infants and activity of the breasts.

33. **Pubiotomy.**—Jardine describes Doederlein's method and reports a case of its use. He is unable to see much to choose between this operation and symphysiotomy. If slight enlargement only is necessary either operation will give it, but if there is considerable disproportion between the head and the passages neither should be selected, especially in a primipara, for in such a case it is almost impossible to deliver without tearing the vagina at its most unsupported part, namely, where the bone has been divided, thus leaving a compound fracture. His own experience of symphysiotomy does not lead him to consider that there is any greater danger of injuring the urethra or bladder in that operation.

34. **Gynecologic Ailments.**—Fothergill discusses the history of the development of gynecology through its mechanical phase, and subsequent infection phase, the latter of which still holds a considerable sway, owing to the misapprehension caused by the frequent use of terms ending in *itis*. The problems presented for solution by non-infective minor ailments of women are by no means simple. The anatomic and physiologic changes of puberty demand further investigation. The life history of the ovary must be kept in mind, for deviations from its normal course must be recognized as factors in etiology. The changes that occur in connection with pregnancy, parturition and involution are even more striking than those that accompany the onset, the recurrence and the cessation of ovulation and menstruation. There are other factors also which often disturb the nervous control and vascular supply of the reproductive organs and originate both symptom and morbid tissue changes, e. g., those arising from some period of general disease, those dating from marriage, and from the commencement of sexual activity, though in the latter cases it is possible that they are dependent on pre-existing conditions, their aggravation by these causes simply leading to examination. He discusses further the real relationship between retroversion and uterine disease, which is still regarded as open and calling for investigation.

40. **Tough Membranes and Prolonged First Stage of Labor.**—Das reports a case of a primipara aged 22, in whom labor commenced at 3 p. m. At 7 a. m. next morning, the pains having continued strong all through the night and recurring at this time every three or four minutes, the patient was anxious and had a pulse of 112. The head was low down. The membranes were very thick and detected with difficulty. The os was only dilated to admit the tips of two fingers and was soft. Das ruptured the membranes without escape of any liquor amnii, at 7:15 a. m., and went away promising to return at 9; on doing so found that the child had been born at 8:10. Thus it took sixteen hours for the os to dilate to two fingers' breadth and less than an hour for the remainder of the first stage and the whole of the second. On examination of the secundines, the placenta was found to have had a low attachment. Looking back over the history of several cases of delayed first stage in primiparæ, he concludes that the low insertion of the placenta was the chief factor of delay, by not allowing the lower uterine segment to retract past the membranes, which were closely applied over the presenting head. When the following conditions are present, therefore, he concludes that rupturing the membrane will expedite labor: 1, Primipara; 2, prolonged first stage; 3, presenting head low in the pelvis; 4, os soft, dilatable and generally thin; 5, very little forewaters; 6, membranes tough, and not bulging through the os during a pain.

Australasian Medical Gazette, Sydney.

February.

41 Case of Arrhythmia of the Heart. J. M. Gill.
42 *Significance of the Pathologic Variations of the Reflex Actions. G. E. Rennie.
43 Protection of India from Invasion by Bubonic Plague. J. A. Thompson.
44 Present Methods of Combating the Plague. W. M. Haffkine.
45 Three Cases of Fracture of the Skull. T. Fiaschi.
46 *Tumors of the Breast Showing Peculiar Histologic Characters. S. Jamieson.
47 Perforated Gastric Ulcer; Operation; Recovery. F. J. T. Sawkins.

42. **Reflex Actions.**—Rennie discusses in a practical manner the physiology, patholgy and diagnostic significance of the presence, exaggeration or absence of the reflexes, particularly the tendon jerks.

46. **An Anomalous Tumor.**—Jamieson describes a tumor of the breast, which in different parts, displayed the following characteristics: In one part the cells resemble in arrangement, etc., an endothelioma; in another, a myeloid sarcoma, and in a third a deciduoma malignum.

Annales de Gynécologie et d'Obstétrique, Paris.

March, XXXV, No. 3, pp. 129-192.

48 *Arrest of Dilatation of the Os During Labor. (Dilatation stationnaire de l'orifice utérin au cours du travail.) V. Wallich.
49 *Appendicitis and Disease of the Uterine Appendages. (Appendicite et annexite.) H. Hartmann. Commenced in No. 2.
50 *Ileus Following Removal of Large Uterine Fibroma. J. Boeckel.
51 *Hypertrophy of Pylorus with Stenosis in Newborn Infant Cured by Plastic Operation on Pylorus. Champetier de Ribes, Guinon and P. Frédet.

48. **Arrest of Dilatation of Cervix During Labor.**—Wallich says that when dilatation reaches a certain point and then remains stationary it must be because the uterus has to struggle against some obstacle to normal dilatation and has become exhausted. There is an evident connection, he asserts, between arrest of dilatation and disproportion between the size of the fetus and the diameter of the birth passages or abnormally low insertion of the placenta. Sometimes the cervix is rigid merely from infiltration with blood and serum. In this condition there can be no further dilatation except by rupture or surgical interference. The amniotic sac will generally be found ruptured in these cases or the fetal skull will be found compressing the wall of the uterus against the bones of the pelvis, interfering with circulation. In treatment of stationary dilatation, if it is due to overdistention of the sac, even during the intervals between contractions, puncture of the sac will bring relief; unless there is overdistention, however, puncture is contraindicated, as it does away with one of the most active factors in physiologic dilatation, while it leaves the fetus unprotected, and there is special danger of infection of the fetus when labor is protracted. If there is functional impotence of the uterus, quinin and sugar may be given; it certainly can do no harm to prescribe sweetened water, but ergot should never be used, Wallich insists, so long as either an ovum or fetus is in the uterus. He does not approve of general hot baths, for fear of infection, but advocates repeated sterile hot vaginal douches at a temperature of 48 or 50 C. (122 F.), while patiently awaiting the reappearance of uterine contractions after a period of repose. Waiting should be governed by the state of the fetus and the danger of rupture of the uterus in women who have borne children before, especially when there have been previous obstetric operations. The uterus in primiparæ is more solid and the cervix intact. The inflatable rubber bag can be used only when the head is high and can be moved, leaving room for expansion of the balloon without fear of rupturing the lower segment of the uterus. If the head is lodged against the wall of the pelvis and is immovable, it is better not to attempt to use the balloon. Instrumental dilatation acts unevenly on the tissues of the cervix, and manual dilatation is only effectual when forcible—both these measures sharing the grave danger of causing rupture; it is almost inevitable when the cervix is rigid from infiltration or from sclerous degeneration. Incisions of the cervix do not open a large enough passage for the fetus, as a rule, and it suffers to such an extent that the mortality is still 25 per cent., according to the statistics collected by Bué; the fetus at the time is already suffering from the effects of the protracted labor. It might be possible, Wallich says, to relieve the infiltration in the cervix by scarifying and massaging the tissues to restore suppleness, but this has not been attempted yet in the clinic. Cesarean section seems to be the only means of avoiding rupture of the uterus with an undilatable cervix.

49. **Appendicitis and Adnexitis.**—Hartmann reports in detail eighteen cases of appendicitis with inflammation in the adnexa, and remarks that he is convinced that many operations have been done for appendicitis when the trouble in reality was some mild affection in the uterine appendages. He does not believe in removing the appendix without cause, agreeing with Kelly that the fact that we do not know what can be the function of the appendix is no proof that it has not a function. At the same time he examines the appendix in all operations on the adnexa, and removes it if there are adhesions, if it is unduly long or if abnormal conditions of any kind are discovered.

50. See abstract 56 in THE JOURNAL, March 7, page 806.

51. **Hypertrophic Pyloric Stenosis in New-Born Infant.**—Within the last five months, three cases have been encountered at Paris and a fourth is here described. The first signs of trouble do not become manifest until about the third week. Vomiting first attracts attention; it is sudden, violent, explosive, often preceded by pain and followed by evident relief. No bile is found in the vomit; constipation and oliguria or even anuria may follow, with dilatation and marked peristalsis of the stomach and a tumor in the pyloric region. The diagnosis may be difficult if these signs develop in the course of a gastroenteritis. In the case described, meconium appeared unusually long in the stools, then enteritis developed and there was complete intolerance of breast milk. Frequent lavage of the stomach induced only transient relief and charcoal given by the mouth did not make its appearance in the stools. The child lost weight rapidly, but remained vivacious, and its screaming was loud and persistent. Lavage of the stomach three or four times a day enabled the child to sleep, which neither morphin nor belladonna had been able to accomplish. The mucous layer in the hypertrophic stenosis of the new-born is not altered, but only exuberant, the hypertrophy affecting exclusively the circular fibers. A submucous pyloroplastic operation is thus all that is necessary, while it is quicker and less serious than the usual technic. The parts may swell after the operation, temporarily closing the lumen anew, but this soon subsides. In the 22 cases of pyloroplastics known to date there were 9 postoperative deaths, and 30 deaths in the 52 cases in which gastroenterostomy was done. The after-care is extremely important for the outcome. In the present case, the child did not thrive until it was taken from the breast at four weeks of age and fed artificially, when the stools became normal in a few hours.

Bulletin de l'Académie de Médecine, Paris.

March 31, LXXII, No. 13, pp. 377-392.

52 *Connection Between Tracheobronchial Adenopathies and Pulmonary Tuberculosis. C. Leroux and Hutinel.
53 *Progress in Obstetrics of Late Years. (Fonctionnement de la clinique Baudelocque.) A. Pinard.

52. **Connection Between Tracheobronchial Glandular Lesions and Tuberculosis.**—Leroux found a tuberculous process in the mediastinal glands in 185 children, tuberculous lesions in the lung in 122, and in 193 both lesions, among 500 tuberculous children he has recently examined. He discusses these findings from several points of view, and urges that children with caseous glands must be considered as already candidates for pulmonary tuberculosis, and that they must be transplanted permanently into fresh air, especially sea air in a mild climate, to eradicate the infection. A brief sojourn does little good; it merely attenuates the symptoms without removing the cause.

53. **Progress in Obstetrics.**—Pinard comments on the great progress realized in obstetrics in the last few years, the morbidity and mortality of childbirth having been most gratifyingly reduced, but the children have not benefited to the same extent as the mothers, he adds. The mortality of the children at birth has not declined at all. The number of fetuses delivered macerated or stillborn is as large now as fifty years ago. It is no longer a question of gestation, but of retention. He adds that the number of deformities is also as large as it was of old. The physician is unable, of course, to reanimate a macerated fetus or to make a hydrocephalic child normal, but he can do much to prevent the occurrence of such things. It is in the power of the profession, he continues, to reduce the number of stillbirths and of idiots, imbeciles and degenerates by wise puericulture. He continues: "The instinct of reproduction of species is the only one which has remained in its primitive state and has not been educated with advancing civilization. Procreation to-day occurs the same as in the stone age. The most important act in life is presided over by chance alone in these days, as in the days of the cave dwellers." In his statistics more than a third of all the children were born before term. Overwork and sexual traumatism during pregnancy act in the same way as the wind which shakes down from the tree the fruit before it is ripe, although the fruit is normal. He pleads with physicians to work for puericulture before procreation and during gestation as the most potent means for the preservation and improvement of the human species.

Obstétrique, Paris.

February, N. S. I., No. 1, pp. 1-128.

54 *The Placenta in Eclampsia. A. Brindeau and L. N. Larrier.
55 *Turpentine in Prevention and Treatment of Puerperal Streptococcus Infections. (Traitement des infections puerpérales par l'essence de térébenthine.) M. Fabre.

56 *Rupture of the Cicatrix in the Uterus After Cesarean Section. L. Meyer.
57 *The Placenta as Culture Medium for Bacteria. (Le placenta est-il un milieu de culture propice au développement des microbes?) P. Guéniot.

54. The Placenta in Eclampsia.—A number of changes in the placenta were observed in eclamptics. None of them seems to be strictly characteristic, but all suggest the effect of some toxin.

55. Turpentine in Prophylaxis and Treatment of Puerperal Streptococcus Infection.—Fabre states that the Lyons maternity is used for teaching purposes, and yet the mortality is lower than outside the hospital. He ascribes this to his method of treatment with essence of turpentine, saying that whether the turpentine is ingested by the mouth, absorbed through the skin, lungs or by subcutaneous injection or introduced into the cavity of the uterus, the action is the same, namely, that of an internal non-toxic antiseptic. The organism tolerates comparatively large doses of turpentine, which has a peculiarly destructive action on the streptococcus. It also induces hyperleucocytosis and raises the opsonic power of the blood. Each of these properties is reviewed in detail. In his experience with turpentine he has found that from 4 to 10 gm. (1 to 3 drams) by the mouth and 2 gm. (30 grains) by subcutaneous injection are small doses and practically free from danger, although he warns against the intravenous route. He has never observed any unfavorable action on the kidneys; the diuretic action is slight. Albuminuria frequently vanishes and does not reappear during the treatment. His favorable experience with 254 infected cases in 6,524 confinements since 1904 has confirmed the value of the turpentine treatment to his complete satisfaction. Since last June he has been applying it systematically in prophylaxis. The results have been encouraging, the morbidity being materially reduced, as he shows by statistics and by comparison of alternating series with and without the injections. It was his predecessor Professor Fochier, who advocated turpentine "fixation abscesses," finding them especially useful in puerperal infection.

56. Rupture of Cicatrix in Uterus After Cesarean Section.—L. Meyer has witnessed two instances of this mishap, bringing the number on record to thirteen. In both his cases the rupture was very small and the viability of the fetus was not impaired. He does not think that this is a mere coincidence, but believes that it was due to his immediate intervention before the rupture had had a chance to enlarge. He ascribes the rupture to infection of the Cesarean wound; when this wound heals without infection the cicatrix is stout and resistant. One of his cases is remarkable because a spindle-celled sarcoma in the sacrum was only partially removed three years ago, the part left being as large as a child's head, yet the woman has passed through two pregnancies and two Cesarean sections since without any change in the tumor or metastasis or impairment of the general health.

57. The Placenta as a Culture Medium.—Guéniot found that the placenta did not prove a favorable culture medium for the streptococcus in his experiments, while the staphylococcus and colon bacillus thrived luxuriantly on it.

Presse Médicale, Paris.

April 1, XVI, No. 27, pp. 209-216.

58 Present Conception of Antibodies. Their Connection with Immunity. (Les anticorps.) Foix and Mallein.
59 Acute Enteritis and Appendicitis. Tardy Perforation of Intestinal Ulcerations. A. Broca.

Semaine Médicale, Paris.

April 8, XXVIII, No. 15, pp. 169-180.

60 *Cyclic Mental States—Cyclothymia. G. Deny.

60. Cyclothymia.—This term is defined in the dictionaries as cyclic insanity, but Deny uses it to express a constitutional tendency to cyclic alternations of emotional exaltation and depression which may in time lead to mania or melancholia, but which as a rule stops short of actual insanity. During the phase of expansion or excitement an imperturbable optimism is the most prominent feature. He relates an instance in which the European buyer for an American firm, on a large salary, suddenly cabled his resignation to the firm, stating that he expected to make a fortune at once in buying and reselling pictures. A few days later he was in despair at the loss of his position. The suddenness with which one phase becomes transformed into its opposite speaks for the common origin of the antagonistic emotionalism. The tendency to cyclothymia may manifest itself early, but is generally first noted at puberty, and the subjects are always persons with an inherited nervous taint; it occurs more frequently in women than in men. Hygiene, hydrotherapy and cultivation of the will power are needed in treatment, with supervision to prevent suicide during the periods of depression. As this phase is always the expression of exhaustion of the psychic centers, he says, the patients should be kept in bed, and only allowed to get up for two or three hours for a little exercise every day. The food should be abundant, but not much at a time, and tepid, interrupted douches for the trunk and limbs will aid in combating the general asthenia. Isolation may be useful, but is not at all indispensable. It does not shorten the duration of the attacks. One of his patients is excited and optimistic every second day and depressed and exhausted on the alternating days, this cyclic regularity having persisted for months and years; generally there is no such regular periodicity in the manifestations. The physical sufferings of neurasthenia are absent in the true cyclothymia to which Deny refers.

Archiv für Gynaekologie, Berlin.

LXXXIV, No. 3, pp. 539-836. Last indexed, March 14, p. 922.

61 Experimental Research on Contractions of Uterus During Delivery, and the Influence of Ether and Morphin. H. Wasenius.
62 Experimental Research on Action of Preparations of Ergot. (Wirkung der Mutterkornpräparate.) E. Kehrer.
63 Age at Commencement of Menstruation. (Alter des Menstruationsbeginns.) R. Schaeffer.
64 *Influence of Bile on Movements of the Uterus. (Einfluss der Galle auf die Uterusbewegungen.) E. Kehrer.
65 *Extraction by Deventer-Mueller Technic. A. Labhardt.
66 *A Gynecologic Phantom. W. Liepmann.
67 *Proportions of Sexes in Births in Austria. (Geschlechtsverhältniss bei den Geburten in Oesterreich.) O. Srdinko.
68 *Elimination of Chlorids in Pregnancy, especially in Pregnancy Nephritis. (Ausscheidung der Chloride in der Schwangerschaft.) W. Zangemeister.

64. Influence of Bile on Contractions of Uterus.—Kehrer noticed that women with jaundice were peculiarly liable to premature delivery; this suggested that bile might have some special influence on the contractions of the uterus. Experiments on animals, on the living and the surviving uterus, confirmed this view. Fresh bile displayed an unmistakable promoting influence on the movements of the uterine musculature. He found, further, that only the sodium glycocholate and taurocholate elements in the bile possess this property, and especially the common constituent of both, sodium cholate. Its action is independent of the accompanying drop in the blood pressure. Kehrer has published numerous works on the influence of various drugs on the living and surviving uterus.

65. Delivery According to Deventer-Mueller Technic.—Labhardt discusses the various methods proposed for management of the arms, in breech presentation and cites experiences which show that Mueller's method of extracting the shoulders without loosening the arms, merely by traction, can be done in the majority of cases (90 per cent.) without trouble. It fails only when the maternal pelvis is contracted and when the arms are in an unfavorable position, especially after version. In such cases Mueller advises forcible traction, but Labhardt advocates the old method of loosening the arms in order to refrain from exposing mother and child to danger of severe injury. His experiences show, he thinks, the great superiority of this method of managing such cases.

66. Gynecologic Phantom.—The organs in this phantom are made of inflatable rubber and thus a great variety of physiologic and pathologic conditions can be simulated by inflating the different organs alone or in combination. The physiologic movements of the organs as the bladder is filled, for instance, are instructively shown, both with the normal and the pregnant uterus. The behavior of the peritoneum is shown by a sheet of transparent rubber tissue laid across the inlet into the

pelvis, and the correction of displacements of the uterus and the technic of the Alexander-Adams operation and others can be readily demonstrated. The article is illustrated.

67. **Childbirths in Austria.**—Srdinko shows by his comprehensive statistical study that more girls are born in country districts in Austria than in cities, and that the Slav races average more girls than the Germans. He deems this a good sign for the further increase of the Slavic nations.

68. **Elimination of Chlorids in Pregnancy.**—Zangemeister has been examining the chlorid metabolism in pregnant women, and states that there is no ground for assuming pathologic retention of chlorids in the nephritis of pregnancy and eclampsia. Deprivation of salt as a therapeutic measure has therefore no logical basis. It may cause the edema to disappear, but only at the expense of the kidneys. They are liable to become irritated from lack of the sodium chlorid in the body fluids to hold other, less soluble salts in solution. It is more logical, he says, to give more salt in the nephritis of pregnancy and eclampsia. Hypertonic salt solution has a diuretic action, but this, too, is at the expense of irritating the kidneys. Several writers have reported the development of albuminuria under deprivation of salt and also under the influence of infusion of a hypertonic saline solution. The trouble in the latter case is not that the sodium chlorid acts as a toxin, but merely the disturbance in the osmotic processes which it induces.

Berliner klinische Wochenschrift.

March 30, XLV, No. 13, pp. 633-680.

69 Practical Importance of Opsonins. Jürgens.
70 Efficiency of Pepsin and Simple Method for Its Determination in the Stomach Content. (Wirksamkeit des Pepsins.) O. Gross.
71 Action of Roentgen Rays on Ferments. (Einwirkung der Röntgenstrahlen auf Fermente.) P. F. Richter and H. Gerhartz.
72 *Operative Treatment of Diffuse Suppurative Peritonitis. Kotzenberg.
73 Insects and Ticks in Transmission of Disease to Man and Animals. (Insekten und Zecken als Krankheitsüberträger.) B. Möllers.

April 6, No. 14, pp. 681-724.

74 *Symptomatology and Treatment of Tumors in Cerebellum. (Kleinhirntumoren.) E. Siemerling. Commenced in No. 13.
75 *Surgery of Brain and Spinal Cord. (Chirurgie des Gehirns und Rückenmarks.) H. Küttner. Commenced in No. 12.
76 Antiferment Action of Human Blood. ("Antifermentwirkung" des Blutes.) Marcus.
77 Forms of Tubercle Bacilli That Do Not Stain with the Ziehl Technic. H. Much.
78 *Importance of Serum Diagnosis of Syphilis for Pathology and Treatment. A. Blaschko.
79 Influence of the Reaction on the Occurrence of Wassermann's Complement Binding in Syphilis. H. Sachs and K. Altmann.

72. **Operative Treatment of Diffuse Suppurative Peritonitis.**—Kotzenberg reports 27 cases with operative treatment, with 2 deaths. One of the fatalities occurred from bilateral empyema two weeks after the operation, and the other was in an elderly woman with weak heart in whom peritonitis had been under way a week before the operation. Dreesman drains are regarded as an important advance in drainage. They are glass tubes slightly convex on the lower side, studded with minute holes, not larger than a millimeter in diameter. The tubes are packed tight with gauze, frequently renewed. Great attention is always paid to exact restoration of the intra-abdominal pressure, suturing in three tiers. The abdominal cavity is flushed with salt solution until the solution runs out clear; no attempt is made to wipe it out. The abdominal cavity is drained by raising the head of the bed at an angle of 20 degrees.

74. **Tumors in Cerebellum.**—Seven cases are described in detail by Siemerling and the various differentiating features reviewed. He states that lumbar puncture and puncture of the lateral ventricle may relieve the pressure to such an extent as to render the tumor operable. If localization is possible, he advises operative intervention, or at least palliative trephining to avert the threatening blindness. His experience indicates that the loss of the corneal reflex is an important focal sign as to the side on which a tumor in the posterior cranial fossa is located.

75. **Surgery of Brain and Spinal Cord.**—Küttner reports twenty-two cases in which he operated on the brain or spinal cord with generally good results. One case in particular shows what can be accomplished, even with a palliative operation. The patient was a man of 36 with symptoms of severe pressure on the brain. Two weeks after the first symptoms he was brought to the clinic in profound coma, and the emergency operation was done at night. Both sides of the cerebellum were exposed by the Krause technic and the frontal brain punctured. No tumor could be found, and the wound was sutured with two small drains at the corners. Within two months the patient was restored to robust health; only a few slight symptoms on close examination show that the brain affection still persists. Küttner advocates trephining over the cerebellum to relieve the pressure in the posterior cranial fossa and save the eyesight. The flap is also stronger and thicker when made at this point, while the conditions are better for ample drainage.

78. **Serum Diagnosis of Syphilis.**—Blaschko reports the application of the complement-binding test in 500 cases, and states that it has never yet given positive findings in the certain absence of syphilis. In one case the aspect of a primary sore on the genitals was typical of syphilis, but no spirochetes could be found and the serum test was negative. Investigation revealed that it was a drug eruption, the patient having been taking migrainin. After the lesion had healed, administration of migrainin again caused the recurrence of the primary pseudosyphilitic lesion in twenty-four hours in an aggravated form. The serum test is of great advantage in the cases in which physicians are not sure whether the patient has syphilis or merely a soft chancre or herpes. A positive serum reaction is a great help. One patient had been thoroughly treated for syphilis fifteen years before. She returned complaining of pains in the sacrum and the test gave a positive reaction. The pain vanished at once after the first specific injection. In another case an old syphilitic returned with violent headaches, but the test gave a negative reaction; the headache was evidently of neurasthenic origin. Blaschko tabulates the findings of the test in 270 cases under observation for a number of years. The reaction was positive in from 90 to 100 per cent. in the early stages and even into the late stages whenever there were external manifestations of syphilis. The findings were positive in 80 per cent. of the early latent cases and in 50 per cent. of the tardily latent. The reaction was positive even before the roseola became apparent and remained positive after subsidence of the symptoms into a late stage of the disease. The test seems to be an index of the constitutional disease, regardless of its external manifestations. The few cases in which the reaction was negative, although the primary sore and roseola confirmed the existence of the disease, suggest the possibility that excision of the focus in these cases might prove effectual in preventing general infection, or might abort it. In one of his fifty-six patients with unmistakable early symptoms the test gave negative findings, showing that refractory individuals are exceptionally encountered. He found, further, that under the influence of specific treatment the test, positive at first, gradually became negative in about half the cases. But in the other half the reaction remained positive, although many of the patients had been in apparently perfect health for years and had raised healthy families. The test is not conclusive in respect to the prognosis. He adds a table showing the mortality of syphilitic policy holders among 8,000 deaths on the records for forty-five years of the Victoria Life Insurance Company. The syphilitics show an "excess mortality" of 68 per cent. over the total mortality; this excess mortality increases to nearly 100 per cent. between the ages of 36 and 50. The table further shows that the excessive mortality in syphilitics is not due exclusively to aneurism, tabes or progressive paralysis, but to chronic affections of the kidneys, gastrointestinal tract or circulatory apparatus, cancer, brain affections exclusive of paralysis, suicide and apoplexy, the excess mortality in syphilitics from the two latter causes being 122 and 128 per cent. The table shows further that tuberculosis, pneumonia and other infectious diseases in syphilitics are rather under the average mortality.

Deutsche medizinische Wochenschrift, Berlin.

April 2, XXXIV, No. 14, pp. 577-624.

80 Modern Hypnotics and Relations Between Their Chemical Composition and Their Action. (Moderne Schlafmittel.) H. Thoms.
81 Chemical Hypnotics in Nervous Affections. (Chemische Schlafmittel.) Ziehen.
82 Sleeping Sickness in German East Africa. (Schlafkrankheit im Bezirk Schirati.) Feldmann.
83 Treatment of Diphtheria with Pyocyanase and Persistence of Diphtheria Bacilli. P. L. Schlippe.
84 Source of Diastatic Ferment in Blood and Its Relation to Diabetes mellitus. (Ursprung des diastatischen Fermentes im Blute.) W. Schlesinger.
85 *Resections of the Pancreas. O. Ehrhardt.

85. Resection of the Pancreas.—Ehrhardt reports two cases of carcinoma of the pylorus in which the head of the pancreas was involved, requiring resection of part of the gland. One of the patients is still in good health a year and a half after the operation. The other succumbed in a few months to metastasis in a gland. Ehrhardt obtained access to the pancreas through the gastrocolic ligament. It is almost impossible to avoid severing the pancreatic-duodenal artery, and this occurred in the case last mentioned, compelling resection of part of the duodenum to prevent gangrene. The bleeding from the pancreas was controlled by fine silk ligatures applied to the larger vessels. The wound did not heal in the last case until a large sequestrum of pancreas tissue had been expelled.

Medizinische Klinik, Berlin.

April 5, IV, No. 14, pp. 477-522.

86 *Exophthalmic Goiter. (Morbus Basedowii.) L. v. Schrötter.
87 *Professional Affections. (Aus dem Gebiete der Berufskrankheiten.) M. Sternberg.
88 Cardiac Insufficiency. (Herzinsuffizienz.) H. Eppinger.
89. *Intrathoracic Goiter. R. Kienböck.
90 Greenish Discoloration of Cornea in Multiple Sclerosis. (Grünliche Hornhautverfärbung bei multipler Sklerose.) R. Salus.
91 By-effects on the Nervous System Early in Course of Mineral Waters. (Der Brunnenrausch.) Loewenthal.

86. Exophthalmic Goiter.—In one case von Schrötter observed patches of dark brown pigmentation over the entire body; in another case localized lipomatosis was a striking feature of the exophthalmic strumous tachycardia, as he prefers to call exophthalmic goiter. In other patients he has observed pigmentation similar to that of Addison's disease. He refers to Löwi's recent researches which demonstrated the existence of mutual relations between the organs with internal secretion, evidenced by pupillary phenomena. He thinks that these facts suggest the participation of the suprarenals in the syndrome of exophthalmic goiter, while the parathyroid glands have nothing to do with it.

87. Professional Affections.—Sternberg deplores the prevalent tendency among physicians to disregard the history, priding themselves on their ability to diagnose the condition without asking the patient a question. This is especially important in case of lead poisoning, and he says that the present fashion for white clothing, white shoes, white walls and woodwork is spreading lead poisoning, as white lead has to be extensively used in the preparation of the garments and paints. White lead is rubbed into white felt hats, and also into white gloves to conceal defects in the kid. The workmen making these articles and the proprietors of the factories and possibly also their families, are liable to suffer from lead poisoning. Chronic nephritis appearing in the members of a certain family was finally traced to the sugar of lead used extensively in the silk factory of which the father was proprietor, the children playing in the factory grounds and the women of the family frequently coming to the factory. He is almost convinced that the increase in the number of kidney affections encountered now is directly connected with the fashion for white, although the use of preservatives in articles of food probably contributes its share. He adds that lead poisoning is too frequently overlooked by the physician, even when the lead line on the gums could be found if sought for. He urges, further, that physicians should bear in mind that certain trades or professions are peculiarly unsuited for persons with certain physical defects. He cites statistics, for example, which show that shoemakers are peculiarly liable to heart affections, the venous congestion induced by the attitude required by the work favoring disturbances in the circulation. A boy presenting any indications of valvular trouble should be warned against this trade. He mentions also that certain kinds of wood are poisonous, and relates that a set of workmen making some furniture out of "Indian rosewood" all developed an itching eruption. Similar eruptions have been observed also in cabinet makers working on "satin wood." African boxwood, from which weavers' shuttles are made, contains an alkaloid which affects the heart, inducing arrhythmia and slowing the pulse. Headache, vertigo, visual disturbances and dyspnea are frequently observed in men working on this wood. In conclusion, he refers to seventeen cases in which busy general practitioners succumbed suddenly to fulminating angina pectoris. In some of the cases inadequately treated syphilis may have been responsible, but in the overwhelming majority the heart trouble was evidently due to the excessively long working hours. The lack of sufficient sleep seems to predispose peculiarly to affections of the coronary arteries. It seems to be established, he adds, that fatal angina pectoris in the fifties is the doom of the busy general practitioner. In conclusion, he declares that many of the affections which we now label as "nervous," in reality are the effect of toxic influences which must be sought in the trade or profession or in the food. Exophthalmic goiter, for instance, which used to be considered a "neurosis," is now on its way to its proper place as a toxic affection. Perhaps certain other "nervous" heart affections and asthmas may yet be traced to toxic influences, like the symptoms observed in the men working on the poisonous woods.

89. Goiter in the Thorax.—Kienböck is the Roentgen ray expert to the Vienna courts, and in this article he describes 11 cases of intrathoracic goiter, with their special differential Roentgen features, and reviews the cases that have been previously reported. Roentgen treatment caused the goiter to subside in size in two of his patients, relieving the disturbances in breathing, but symptoms of thyroid poisoning developed in one. Wuhrmann collected from the literature 27 cases in which operative treatment was instituted, with recovery in 21 cases; 6 of the patients died.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena.

XVIII, No. 4, pp. 557-744. Last indexed, Feb. 15, p. 569.

92 *Nature and Clinical Importance of Inflammatory Leucocytosis. (Wesen und klinische Bedeutung der entzündlichen Leukocytose.) S. Kostlivy.
93 *Sensations in the Internal Organs. (Empfindungen in unseren inneren Organen.) L. R. Müller.
94 Bacteriologic and Clinical Study of Colon and Paracolon Bacillus Infection. F. Blumenthal and A. Hamm.
95 Puncture of the Brain. ("Weitere Beiträge zur Hirnpunktur.") F. Apelt.
96 *Late Rachitis and Relations Between Rachitis and Osteomalacia. (Spätrachitis und Beziehungen zwischen Rachitis und Osteomalacie.) E. Looser.

92. Nature and Clinical Importance of Leucocytosis.—Kostlivy has examined 225 cases of inflammatory affections in respect to the connection between the leucocytosis and the inflammatory process. The Arneth theory that the leucocytes are used up in the production of antibodies seems to be sustained by recent research, while it explains the findings. The septic destruction of leucocytes is a necessary consequence of the defensive measures of the organism against invading infection. An increase in the numbers of leucocytes accompanies the overwhelming majority of pus-forming inflammations. The height of the leucocytosis is dependent on the extent of the production of leucocytes, and this in turn depends on the amount of toxins absorbed, as the latter furnishes the stimulus for the leucocyte-producing apparatus. The leucocytosis increases as the inflammation progresses and declines as it subsides. The differential leucocyte count is the expression of the difference between the intensity of leucocyte production and the numbers of leucocytes used up in the production of the antibodies. As soon as the leucocyte-producing system ceases to be able to produce ripe leucocytes fast enough to take the places of those destroyed in the production of antibodies, then it sends out more and more immature cells, the proportion of young cells in the circulation increasing as the numbers of

older, ripe cells decline. The leucocyte count, therefore, will show the relative leucocytosis, and the polynuclear neutrophile count will afford insight into the absolute leucocytosis and the amount of destruction of leucocytes going on. The leucocyte reaction is purely individual, and it may be induced by other stimuli besides suppurative inflammation. It reflects the degree of toxic poisoning, but the extent of the reaction varies in individual cases. Like all reactions, the response at first is liable to be excessive, an overcompensation, consequently, the later blood pictures are more significant than those first obtained. The leucocyte count, repeated at intervals, is principally valuable for prognosis and control of the progress of the affection. As the leucocytosis is an expression of the virulence and toxicity of the infection, rather than of its extent, it is of not much use in diagnosis, and only in combination with other diagnostic measures, but under these restrictions it may occasionally afford valuable information in dubious cases, especially in regard to indications for treatment.

93. **The Sensibility of Our Internal Organs.**—Müller reviews the literature on the lack of sensibility in some of the internal organs, and reports his own research in this line. He has been impressed with the peculiar harmony between the sensations experienced and the circumstances in which they occur. They differ for the different organs, but are characteristically adapted for their purpose in each case. Pain in the head, for example, occurs after mental overwork, after intoxication with alcohol, nicotin and other substances; the headache warns the individual not to expose himself further to these injurious influences. Inhalation of poisonous gases irritates the pulmonary branches of the vagus and the respiratory center feels an inhibiting impulse. When the heart begins to pound during excessive physical exertion, this warns the individual to stop the overexertion; the pains which are caused by deficient blood supply to the heart compel complete repose. Pains in the stomach and intestines warn that inappropriate food has been taken and that the diet must be regulated, or if they are due to insufficient blood supply they compel repose, as is also the case with gallstones and kidney stones. The latter compel the victim to stop work and devote himself to relieving his condition. As the internal organs are protected against heat, cold and contact from without they do not require the protection against them which is needed by the outer covering of the body. Conditions which can not be remedied from without, such as infiltration or ulceration in the lungs, a tumor in the liver or ulceration in the heart valves, generally run their course without pain. Even intestinal ulceration causes no sensory irritation. But wherever there is a possibility for the injury to be remedied from without, or if the irritating substances can be expelled, as in case of sputum in the bronchi, putrefying or unsuitable food in the stomach and inflammatory products in the intestines or bladder, at these points there is sensibility. Painful sensations are experienced when it is possible for the disturbance, be it ischemia or colic, to be corrected by care and repose. The lack of sensibility on the part of the internal organs for irritation from without does not prove by any means, therefore, that pains can not be experienced from them. The sympathetic nervous system not only transmits emotional influences from the central nervous system to the vasomotors, the sweat glands, the stomach, intestines and sexual organs, but it can also transmit sensations from the internal organs to the brain.

96. **Rachitis and Osteomalacia.**—Looser's monograph is based on examination of the amputated leg of an idiot of 27 who developed tardy rachitis at the age of 13. The literature on the subject is reviewed and arguments presented to sustain the assumption that the features of rachitis and of osteomalacia are the result of some cause, outside the bony system, which has an inhibiting action on bone formation and on bone growth. Both rachitis and osteomalacia display a regressive process and a progressive or reparatory process. The latter is most pronounced in infantile rachitis, is less marked in tardy rachitis, is only slightly evident in osteomalacia and is entirely lacking in senile osteomalacia.

Münchener medizinische Wochenschrift.

March 31, LV, No. 13, pp. 657-712.

97 Responsibility for Crimes Committed While Drunk. (Trunkenheitsdelikte und Strafrecht.) Heilbronner.
98 Experiences with Arc Light Treatment of Cutaneous Affections. (Bogenlichtbestrahlung bei Hauterkrankungen.) Riedel.
99 Nervous Phenomena After Operations on Stomach. (Seltene Komplikation nach Magenoperation.) A. Stieda.
100 *History and Technic of Orthodiagraphy. F. Moritz.
101 *Treatment of Spasm of the Cardia. Geissler.
102 Wire Frame, Shape of Hand, to Aid in Sterilization of Rubber Gloves. (Drahtgestell für Gummihandschühe.) S. Flatau.

100. **History and Technic of Orthodiagraphy.**—Since Moritz invented this term eight years ago to apply to his method of taking Roentgen pictures by outlining with the parallel rays alone, this method of examination has found wide adoption, especially for determining the outlines of the heart under varying conditions. He here describes his modified and improved technic, with an illustration of his horizontal apparatus for the purpose.

101. **Treatment of Spasmodic Contraction of the Cardia, etc.**—Geissler gives an illustrated description of a strong inflatable rubber bag on the end of a stomach sound with which he has found it possible to overcome spasm of the cardia. The bag is four or five times as long as it is wide, even when inflated, and it is enclosed in a silk netting, and this again in a second bag with netting. Either air or water can be used to distend the bag. He has found it useful also in stenosis of the rectum.

Virchows Archiv, Berlin.

March, CXCI, No. 3, pp. 411-556.

103 Metastasis from Ganglion Neuroma. J. W. Miller.
104 Development of Bone Marrow. (Entwicklung des Knochenmarks.) Külbs.
105 Behavior of Blood Vessels in Wall of Uterus. (Verhalten der Blutgefässe in der Uteruswand.) J. Kon and Y. Karaki.
106 Experimental Sclerotic Affections of Arteries After Injections of Adrenalin. J. J. Schirokogoroff.
107 Hydronephrosis and Its Relations to Accessory Renal Blood Vessels. (Hydronephrose und ihre Beziehung zu akzessorischen Nierengefässen.) H. Merkel.

Zeitschrift für klinische Medizin, Berlin.

LXV, Nos. 1-2, pp. 1-160. Last indexed, Feb. 15, p. 571.

108 Ferments and Fever. (Fermente und Fieber.) E. Aronsohn and F. Blumenthal.
109 Metabolism in Acromegaly. (Stoffwechsel bei Akromegalie.) E. Oberndörffer.
110 Sclerosis of Pulmonary Artery under Continuous Excessive Beer Drinking. S. Kitamura.
111. Study of Purin Metabolism. (Purinstoffwechsel.) M. van Herwerden.
112 *Value of Salomon's Method of Differentiating Carcinoma of Stomach. (Wert der Methode H. Salomons für die Differentialdiagnose des Magenkarzinoms.) J. Witte.
113 *Clinical and Bacteriologic Study of Croupous Pneumonia, Especially the Bacteriemia. Wiens.
114 Coefficient of Pulse Rate in Normal and Pathologic Conditions. (Coeffizient der Pulszelerität.) W. Janowski.
115 Value of Complement-Binding Test in Diagnosis of Typhoid Fever. (Wert des Komplementbindungsverfahrens in der Diagnose des Typhus abdominalis.) J. Kentzler and G. Kiralyfi.
116 Physiology of the Movements of the Heart. (Physiologie der Herzbewegung.) E. Rautenberg.
117 *Black Pigmentation of Connective Tissue and Its Derivatives. (Ochronose.) A. Wagner.
118 Quantitative Determination of Albumin by Electric Conductibility. (Quantitative Eiweissbestimmung mit Hilfe der elektrischen Leitfähigkeit.) R. Kohler.
119 Metabolism in Traumatic Tetanus. (Stoffwechsel bei Tetanus traumaticus.) J. Mendi.

112. **The Salomon Differential Test for Cancer of the Stomach.**—Witte describes exhaustive tests of Salomon's technic, which is based on the finding of albumin in the fasting stomach content. He assumes that albumin and nitrogen then found in the stomach content must be due to exudation from an ulcerating surface. Witte's experience confirms this view and throws new light on the findings. The Salomon technic was described in THE JOURNAL, Sept. 12, 1903, page 694.

113. **Pneumococci in Blood in Croupous Pneumonia.**—Wiens reviews the cases that have been published in which bacteriemia was evident, citing the statistics since 1900 and reporting thirty-three cases from his own experience. He concludes that bacteriemia is constant in croupous pneumonia and can be found invariably if suitable fluid culture media are used.

117. **Ochronosis.**—Wagner has encountered 2 cases of this peculiar black pigmentation of the connective tissue and its derivatives. He reports them in detail and tabulates the details of 12 others from the literature. In his last patient the ochronosis was not discovered until autopsy, but there had

been pronounced alcaptonuria during life. In only 5 of the cases on record was the condition diagnosed during life, as there were no external manifestations of the pigmentation. In some cases the pigment is eliminated in the urine; it is chemically allied to melanin, but is free from iron. It seems to circulate dissolved in the blood, and the affection, like diabetes, is undoubtedly the result of some anomaly in metabolism.

Zentralblatt für Gynäkologie, Leipsic.

March 21, XXXII, No. 12, pp. 393-424.

120 Light as a Disinfectant. (Licht als Desinfiziens.) H. Axmann.
121 Funnel for Irrigating Vagina. (Scheidenspültrichter.) Behm.
122 Modification of Fritsch-Bozemann Catheter. Ekstein.
123 Finger Cap Curette. (Fingercurette zur Entfernung von Abortusresten.) S. Kaufmann (Dürkheim).

March 28, No. 13, pp. 425-448.

124 Epithelium in Sexually Mature Uterus. L. Mandl.
125 Photographic Registration of Fetal Heart Sounds. (Photographische Registrierung der fötalen Herztöne.) J. Hofbauer and O. Weiss.
126 Treatment of Fracture of the Upper Arm in Newborn Infants. (Behandlung der Oberarmbrüche Neugeborener.) F. Brewitt.

April 4, No. 14, pp. 449-472.

127 Decapsulation of Kidney in Eclampsia. (Nierendekapsulation bei Eklampsie.) E. Essen-Möller.
128 Frank's "Suprasymphyseal Delivery." (Suprasymphysäre Entbindung.) P. Baumm.

Zentralblatt für Kinderheilkunde, Leipsic.

January, XIII, No. 1, pp. 1-48.

129 *Operations on Children. (Aphorismen zur Kinderchirurgie.) C. Bayer. Concluded in No. 2.

March, No. 3, pp. 89-132.

130 Three Cases of Spastic Paraplegia in One Family. (Familiäre Form von Zerebraler Diplegie.) E. Hagenbach-Burckhardt.
131 Treatment of Rachitis. A. Klautsch.

129. Surgery for Children.—Bayer reviews his twenty years of surgical work on children and emphasizes the differences between surgery for children and that for adults. The benefits of asepsis are especially prominent in operations on children, and much irrigation, he says, and "thorough disinfection" are better dispensed with. His experience with Bier's constriction hyperemia for joint tuberculosis and phlegmons has not been encouraging, but excellent results have been obtained with prolonged hot local baths for all open septic foci. Tuberculous phalangitis in young children healed under mercurial plaster or else improved to such an extent that only a trivial operation was required to complete the cure. The strips of plaster are left on for several days, with a dressing over them at night of aluminum acetate. He applies the mercurial plaster strips also to tuberculous joints before placing them in a plaster cast; fungous swellings in the soft parts and capsule subside quicker. Wryneck in a new-born infant is treated with daily stretching and remodeling, with light massage, and packs. In an older child he severs the sternocleido muscle under chloroform, subcutaneously, and immobilizes the neck. He says that clubfoot in the new-born infant is easily remedied. Until the skin is able to tolerate a little pressure the mother is taught how to twist the foot daily into the corrected position. After a week or two, the foot can be wrapped with a flannel bandage in a correcting position. Strips of plaster to re-enforce the flannel bandage outside are useful. A correcting sandal concludes the treatment long before the child begins to walk. Clubfoot in an older child requires severing of the Achilles tendon, holding the foot in the corrected position by means of a metal sole with wooden splints, fastened on with soft bandages. This is more practical, lighter and more convenient than a cast and allows oversight better. Still older children require wedge-shaped excision of the tarsus and clubfoot boots. Congenital dislocations, especially of the hip joint, are corrected as soon as the child is out of diapers (from the second year on). The difficulties increase as the child grows older, and may be serious even at seven and may sometimes prove absolutely insurmountable after ten. Eeven in apparently irremediable conditions, however, he has occasionally been successful by drawing down the limb, nailing the capsule, with prolonged extension, and final application of a walking apparatus. The joint became firm and the gait much improved. This technic, he thinks, is preferable to more extensive operations liable to prove dangerous. It has been his experience that atresia of the rectum or anus, ruptured umbilical hernia, spina bifida and similar congenital deformities occur only in children with very low resisting powers. Although the deformity was readily corrected, none of the infants in this class long survived. He does not operate for harelip until the child is six months old, and for cleft palate not until 5 or 6 years. He has always had cause to regret his action when he departed from this rule. Fatal enteritis or bronchitis carries off the child operated on too early. With cleft palate the main point is to train the child to speak properly.

Operations for hernia in children give gratifying results. He operates at once in every acute case of tuberculous peritonitis; if not seen until the fifth day or later he does not operate unless there are signs of an abscess or the disease takes a turn for the worse, but after the effusion has been absorbed, then he always opens the abdomen. He has sometimes palpated a tumor-like retroperitoneal effusion behind the bladder—the sequel of peritonitis. Under careful treatment with packs, dieting, catheterization and rectal injections, these effusions generally subsided without leaving a trace. Spontaneous reduction of intussusception occurred in only one of his cases. Malignant intestinal tumors are rare in children; he encountered only one case of carcinoma of the rectum in a girl of 14. In removing a rectal polyp he used to have occasional severe hemorrhage as the pedicle was cut, but this is entirely obviated by ligating it before severing it with the actual cautery. Children with persisting large thymus glands seem to be peculiarly non-resistant, especially to anesthetics. It is hard to diagnose the persisting large thymus; he never met with a tumor in the thymus in a child, but in a case of sudden death of an adult, as the patient sat up in bed, autopsy revealed sarcoma of the thymus. One child had a sarcoma removed from the orbit ten years ago, and is still in good health, as also a boy with sarcoma of the clavicle operated on eight years ago. In the place of the clavicle there is merely a tough cicatrix, but the movements of the arm are unhindered. As a rule, cancer in children seems to be exceptionally malignant. It always behaves like aberrant embryonal tissue, retaining the fetal characteristic of rapid growth. In conclusion, Bayer laments that the most brilliant surgical successes in children are so often undone by an intercurrent enteritis or scarlet fever. He advises always scanty chloroform by the drop method, changing to Billroth mixture as soon as the child is unconscious. Even very young infants take anesthetics well, and wake up ready to eat; cocain, morphin and spinal anesthesia are contraindicated for children.

Gazzetta degli Ospedali, Milan.

March 22, XXIX, No. 35, pp. 361-376.

132 Negative Value of Yefimov Test for Helminths. (Diagnosi di elmintiasi intestinale.) M. V. Carletti.
133 *Connection Between Eosinophilia and Antibodies in Serum. Bazzicalupo.
134 Tumor in Omentum as Content of Hernial Sac. (Tumori epiploici erniari.) E. Arcoleo.
135 *Hyperemic Treatment of Acute Superficial Glandular Lesions. (Iperemia nelle adeniti.) U. Gironi.

March 29, No. 38, pp. 393-408.

136 Syringomyelitic Dissociation of Sensation of Cerebral Origin. T. Silvestri.
137 *Subcutaneous Injection of Oxygen in Treatment of Neuralgia, Especially Sciatica. (Ipodermoemfisi ossigenata come terapia delle forme nevralgiche.) F. Sicuriani.
138 *Ocular Reaction to Tuberculin in Differentiation of Tuberculous Joint Processes. (Oftalmoreazione nella diagnosi del reumatismo articolare tubercoloso.) G. Alessandri.
139 Variability in Heart Findings. (Variazioni cardiache.) Capozzi and L. Minervini.

133. Research on Eosinophilia.—Bazzicalupo discusses the various theories that have been advanced in regard to the functions and significance of the eosinophiles, and then reports research which, he thinks, abundantly confirms the view that eosinophilia has some direct relation to the presence of toxins in the blood, and thus to general intoxication. A further connection is evident, he affirms, between the degree of the intoxication and the degree of eosinophilia on the one hand, and the production of antibodies or other defensive processes on the other, the latter standing in inverse proportion to the former. He is convinced that the eosinophile leucocytes are those which have become prematurely old in their struggle for the autodefense of the organism against toxic influences. Eosino-

philia, therefore, is a sign, he asserts, not of a conflict in the full vigor of energy of the defensive processes, but of a prolonged conflict with flagging or exhausted energy in the vital defensive processes.

135. **Hyperemic Treatment of Superficial Glandular Lesions.**—Gironi's experiences with 20 patients confirm the advantages of hyperemia as a therapeutic measure. He first applied a cupping glass after making a small incision, and then kept up the hyperemia with hot compresses after removing the vacuum glass. Healing proceeded unusually rapidly and completely, and he found that serum obtained from the part treated had acquired pronounced bacteriolytic powers.

136. **Subcutaneous Injections of Oxygen in Neuralgia.**—Sicuriani reports 17 cases of neuralgia, mostly old inveterate sciatica, in which a cure was obtained by subcutaneous injection of oxygen. All but one of the patients were men between 25 and 75, and 11 had had simple primary sciatica for from one to twelve months, the pain being so severe that none was able to work. All had the usual painful points and Lasegue's sign, that is, pain when the leg, held stiff, was raised horizontally and subsidence of the pain when the thigh was flexed on the pelvis with the knee flexed. These patients were all cured in the course of 15 days with from 6 to 10 applications of the oxygen, injecting each time about 300 c.c. (10 ounces). The oxygen abolishes the pain completely, while improving the nutrition of the parts and the general metabolism. Its application is simple and inexpensive. Of course, when the pain is due to mechanical compression, this must be removed before the oxygen can exert its effect. About a year ago, Massalongo reported the cure in one month of 9 patients with severe sciatica with from 10 to 12 injections of from 250 to 500 c.c. (8 to 16 ounces) of oxygen each. Eleven other patients were cured in the course of two months. Bernabei has been proclaiming the advantages of this "oxygen hypodermoemphysema," as he calls it, since 1902, expatiating on its threefold action, hematogenic, dynamogenic and metabolic. This communication issues from his clinic at Siena.

138. **Ocular Reaction in Articular Rheumatism.**—Alessandri's patient was a young woman, whose husband had died from pulmonary phthisis not long before. She entered the hospital with the diagnosis of acute articular rheumatism, but ocular instillation of tuberculin induced a specific positive reaction, and the course of the affection confirmed its tuberculous nature. As one joint healed, others became involved.

Policlinico, Rome.

March 29, XV, Practical Section, No. 13, pp. 389-420.

140 *Filtrability of the Virus of Variola. O. Casagrandi. Id. L. Della Vida.

141 *Megacolon. (Malattia dell' Hirschsprung.) E. Casati.

April 5, No. 14, pp. 421-452.

142 The Paravertebral Triangle on Opposite Side in Unilateral Pleurisy and Pneumonia. (Il triangolo paravertebrala opposto nei versamenti pleurici unilaterali liberi e nella pneumonite franca unilaterale della base.) P. Clerico.

140. **Filtrability of Virus of Smallpox.**—Casagrandi's experiments confirmed the possibility of filtering smallpox virus without impairing its infectious properties. He also found that the virus of cowpox and that of smallpox behaved identically in their response to the complement-binding test. As this test is so truly specific, he thinks that this identical behavior indicates the identity of the antigens in the two infections. He reports, further, that the minute corpuscles found in the virus by him, by Volpino, Paschen and others, especially prominent with the ultramicroscope, seem to answer the conditions of the causative germ.

141. **Megacolon.**—Casati describes two cases and advocates treatment by exposing the colon and taking up a lengthwise fold or tuck in it. This operation has been done successfully in the clinic, and remedies the condition, while the operation in itself is not very serious. The diagnosis can be based on the habitual constipation from infancy, the recurrence of signs of intestinal occlusion, the absence of apparent peristalsis in the intestines, and the lack of indican in the urine, besides the behavior of fluids injected into the intestine and the distention of the abdomen.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

MATERIA MEDICA FOR NURSES. By John E. Groff, Ph.G., Apothecary in the Rhode Island Hospital; Professor of Materia Medica in the Rhode Island College of Pharmacy. Fourth Revised Edition. Rearranged by Lucy C. Ayers, Superintendent of Nurses Training School, Rhode Island Hospital. Section on Therapeutics Rewritten by Herman C. Pitts, M.D., Gynecological Surgeon, Rhode Island Hospital. Cloth. Pp. 221. Price, $1.25. Philadelphia: P. Blakston's Son & Co., 1908.

PROTOZOA AND DISEASE. By J. Jackson Clarke, M.B. Lond., F.R.C.S., Formerly Pathologist to St. Mary's Hospital, and Curator of the Museum, Demonstrator of Bacteriology, and Provisional Teacher of Biology in the Medical School. Part II. Cloth. Pp. 137, with illustrations. Price, $2.50. New York: William Wood & Co., 1908.

MINOR MALADIES AND THEIR TREATMENT. By Leonard Williams, M.D., M.R.C.P., Physician to the French Hospital; Assistant-Physician to the Metropolitan Hospital; and Late Assistant-Physician to the German Hospital. Second Edition, Revised and Enlarged. Cloth. Pp. 404. Price, $2.50. New York: William Wood & Co., 1908.

HERNIA. By W. McAdam Eccles, M.S. (Lond.), F.R.C.S. (Eng.), Examiner in Surgery to the Society of Apothecaries; Examiner in Anatomy for the Fellowship of the Royal Colleges of Surgeons of England. Third Edition. Cloth. Pp. 234, with illustrations. Price, $2.50. New York: William Wood & Co., 1908.

DISEASES OF THE NOSE, THROAT AND EAR. By William Lincoln Ballenger, M.D., Department of Medicine, University of Illinois, Fellow of the American Laryngological Association. Cloth. Pp. 905, with illustrations. Price $5.50. Philadelphia and New York: Lea & Febiger, 1908.

CLINICAL LECTURES, THIRD SERIES, THE BORDERLAND OF EPILEPSY. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S., Hon. Fellow R. Coll. Phys., Ireland. Cloth. Pp. 121. Price, $1.25. Philadelphia: P. Blakiston's Son & Co., 1907.

THE LABYRINTH OF ANIMALS. By Albert A. Gray, M.D. (Glas.), F.R.S.E., Surgeon for Diseases of the Ear to the Victoria Infirmary, Glasgow. Volume II. Cloth. Pp. 252, with illustrations. Price $10.00. London: J. and A. Churchill, 1908.

GLIMPSES OF MEDICAL EUROPE. By Ralph L. Thompson, M.D., Professor of Pathology, St. Louis University School of Medicine. Cloth. Pp. 235, with illustrations. Price, $2.00. Philadelphia and London: J. B. Lippincott Co., 1908.

CLIMATE. By Robert DeCourcy Ward, Assistant Professor of Climatology in Harvard University. Cloth. Pp. 372, with illustrations. Price, $2.00. New York: G. P. Putnam's Sons. London: John Murray, 1908.

INJURIES OF NERVES AND THEIR TREATMENT. By James Sherren, F.R.C.S. Eng., Assistant Surgeon to the London Hospital. Cloth. Pp. 310, with illustrations. Price, $2.00. New York: William Wood & Co., 1908.

NURSING THE INSANE. By Clara Barrus, M.D., Woman Assistant Physician in the Middleton State Homeopathic Hospital, Middleton, N. Y. Cloth. Pp. 409. Price, $2.00. New York: The Macmillan Co., 1908.

MORTALITY STATISTICS, 1906. Department of Commerce and Labor, Bureau of the Census. Seventh Annual Report. Cloth. Pp. 480. Washington: Government Printing Office, 1908.

NEW PATENTS.

Recent patents of interest to physicians:

883003. Audiphone. O. J. Davy, Washington, D. C.
883013. Vibrator. A. G. Gray, St. John, N. B., Canada.
882641. Invalid bed. C. T. Joslin, Jerusalem, N. Y.
883142. Non-darkening lithophone and making same. I. P. Lihme, Cleveland, Ohio.
882590. Manufacture of salicylic glycerin esters. C. Sorger, Frankfort-on-the-Main, Germany.
883153. Syringe. T. H. Wallis, deceased, Ocala, Fla.; M. O. Wallis, administratrix.
883329. Double masseur and medicator. C. H. Murray, Macon, Ga.
883672. Indicating bottle. W. C. Schmidt, Richmond, Va.
883357. Combined abdominal and hernia pad. M. A. Snell and C. A. Snell, Syracuse, N. Y.
883583. Stomach pump. J. F. Stallsmith, Topeka, Kan.
39236. Design, bed-pan. C. W. Meinecke, New York, N. Y.
884121. Automatic electric alarm for beds to be occupied by patients, such as hospital beds. F. Apoldt, Philadelphia, Pa.
884160. Device for applying counter-irritants. E. M. Jefferson, Philadelphia, Pa.
884026. Blood compound of glycerophosphate of lime and calcium, A. Langer, Friedrichsberg, near Berlin, Germany.
884025. Manufacturing blood-albumin preparations. A. Langer, Friedrichsberg, near Berlin, Germany.
884027. Massaging machine. C. A. Manker, Pearl, Ill.
883969. Nozzle holder. J. J. Meskill, Philadelphia, Pa.
883987. Apparatus for administering anesthetics. C. K. Teter, Cleveland, Ohio.
884458. Electric-current regulator. A. W Brice, Rochester, N. Y.
884376. Device for curing ingrowing toenails. C. J. Foster, Van Wert, Ohio.
884390. Medicine spoon. W. L. Jerkins, Mountrie, Ga.
884393. Invalid bed. E. A. Keasey, Ligonier, Ind.
884842. Bed pan. E. Nelson, Long Beach, Cal.
884878. Manufacture of emulsions. J. P. Van der Ploeg, Amsterdam, Netherlands.